REPORT RESUMES

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PROJECT LITERACY, SUMMARY OF FIRST GRADE STUDY, 1965-1966.
BY- ROBINSON, JOANNE A.
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AN INNOVATIVE, BEGINNING-READING PROGRAM WAS EVALUATED DURING A 1-YEAR PERIOD OF CLASSROOM RESEARCH ACTIVITY. THE PROGRAM HAD BEEN DEVELOPED AS A PART OF "PROJECT LITERACY," A BASIC RESEARCH AND CURRICULUM-DEVELOPMENT EFFORT IN AREAS OF EDUCATION RELEVANT TO THE ACQUISITION OF LITERACY SKILLS. THE EVALUATION WAS CONDUCTED IN A FIRST-GRADE CLASSROOM CONTAINING A HETEROGENEOUS GROUP OF 23 CHILDREN. CHILDREN'S OWN STORIES, TEACHER'S SENTENCES, TRADE BOOKS, TEXTBOOKS, MESSAGES FROM ONE CHILD TO ANOTHER, BULLETIN-BOARD TITLES, WORKSHEETS, RIDDLES, CROSSWORD PUZZLES, AND STORIES COMPOSED BY THE "PROJECT LITERACY" STAFF WERE USED TO ALLOW THE CHILD THE FULL RANGE OF SAMPLING NECESSARY FOR READING IN VARIOUS SITUATIONS. A LETTER PHONICS PROGRAM WAS INTEGRATED WITH THE READING INSTRUCTION FOR THE SLOWER-MOVING READERS. TO CREATE A LITERATE ENVIRONMENT, WHICH WAS THE PROGRAM'S FIRST OBJECTIVE, SUCH ITEMS AS A MESSAGE BOARD, A TAPE RECORDER, AND AN ELECTRIC TYPEWRITER WERE PROVIDED. NO SHARP DEMARCATION WAS MADE AMONG THE ACTIVITIES OF READING, LISTENING, AND WRITING. DURING EACH OF THE INSTRUCTIONAL PERIODS, THESE ACTIVITIES WERE INTERSPERSED AMONG SUBGROUPS OF CHILDREN. ALL OF THE PARTICIPATING CHILDREN LEARNED TO READ. EVEN THE SLOWER READERS WERE READING COMFORTABLY AT A FIRST-GRADE LEVEL AT THE YEAR'S END, AND MOST WERE READING ABOVE GRADE LEVEL. A SECOND-YEAR PROGRAM WITH TWO FIRST-GRADE CLASSROOMS WAS PLANNED. A RELATED REPORT IS AA 000 022. (JH)

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PROJECT LITERACY

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SUMMARY OF FIRST GRADE STUDY

1965 - 1966

ED011589

The first grade reading study was under the direct supervision of Joanne A. Robinson and the major portion of the report written by her. Sections on use of the tape recorder and typewriter are by Mary Sue Ammon. Andrew Biemiller and Sylvia Gilmore are responsible for data analysis in the final sections.

We wish to thank Mary Sue Ammon, Joanna Williams and Linda Roberts for their advice and help at all times but in particular Dr. Williams for clarifying and codifying the postualtes from the Summer Seminar, 1965; Mrs. Roberts for her carefully planned and ingenuous lessons for the pre-reading unit on Coding Games, Mrs. Ammon for critical reading and suggestions concerning classroom activities.

We wish to thank Beryle Cushman, our first grade teacher, for her whole-hearted cooperation, patience, and creativity in making our ideas come to life. She was in every way an active and thoughtful participant in planning and revising the curriculum. We also extend our thanks to Louise Wilson, principal of the School for welcoming us into her school, and to Anne Gunning, Curriculum Director, for allowing the study to take place, and her interest in its day to day progress.

This report would not have been possible without the patience of our secretary, Jean Simmons.

DRAFT

FIRST GRADE STUDY: SEPTEMBER 1965 - JUNE 1966

I. Description of the classroom

A. The children.

We worked with a first grade containing a hetereogeneous group of 23 children, 13 boys and 10 girls. A new pupil in April raised the total of girls to 11. The school served an upper middle class residential area and contained two or three rooms at each grade level from Kindergarten to Grade 6. Our first impressions of the children in the classroom were that they were articulate, outspoken, curious; they seemed somewhat high-strung, were easily bored, lacked self-constraint, patience, or concentration on a given task for any length of time. A group I.Q. test administered by the school in September (Thorndike-Lorge) indicated a mean I.Q. of 110.5 and a range of 85-124.

B. The teacher.

The first grade teacher had been college-educated before marriage and three years ago last fall, with her own children old enough and a master's Degree in Education, decided to teach first grade. She had taught in the same school for the three years. Our impressions of the teacher were that she was sensitive to children, gave individual help often; tried to involve students in a positive manner, reinforced correct responses and used approval in class management and discipline. Although there was an atmosphere of freedom within the class, the school day was regularly structured and lessons for the day always planned. The teacher, in short, made this room a very comfortable place for first graders to be.

C. The staff.

The full-time staff of the first grade project consisted of three people. A Research Associate (half-time) was responsible for writing materials which were unavailable commercially. These materials took the form of phonics lessons for whole class and later small group use and the production of games and other devices to review the vocabulary words presented in the early reading matter. She also worked out lesson plans for a pre-reading unit on codes and coding games, and taught this month long unit to a class of Kindergarteners in the late Spring.

One full time Research Associate served as Observer in the classroom. The observer recorded all language arts activities that occurred in the classroom during the morning session. For the first few months of school she remained passive in her relation to the children in order to allow the teacher to form the major relationship with them. In later months, the observer, besides recording data from several reading groups each day, kept a list of the variety of language activities as they occurred. All individual and small group testing was carried out by the observer. She supervised language activites (to be discussed elsewhere) with small groups and individuals who were not engaged in a reading group. The observer came to be regarded by the children as a combination sub teacher-older-sister and although they frequently turned to her (or indeed any stray visitor) to help spell a word or answer a question, she never interfered with the teacher's position as the authority in the classroom. Besides the classroom time, the observer collected materials from the central school library, prepared materials for the language activities, worked on some of the phonics lessons, prepared and corrected diagnostic testing material and compiled the daily records and samples of work, from which weekly summaries could be prepared. These daily records and weekly summaries are available elsewhere.

A third full-time Research Associate acted as co-ordinator of the program under Dr. Levin, the Director of the Project.

The Project Literacy Staff and the teacher worked as a team, meeting weekly (and informally at other times) to discuss materials, sequences, individual's progress, theoretical problems; to assess what had recently occurred and sketch out immediate and long range plans. Any new procedure being tried out was discussed and reactions to it evaluated. The team worked closely together and each member appears in greater or lesser degree in the procedures and materials reported here. Besides the full time staff, other members of Project Literacy or the Laboratory for Research on Language Skills donated advice and help from time to time.

II. The First Month - Introduction to Reading.

The first postulate of the summer seminar concerned skills prerequisite to reading. There were two levels of training thought necessary. One was a general understanding of the writing system as a code standing for language, a code which has the characteristics of arbitrariness, order, and a pattern of relationships to the sounds of the language.

Given this understanding, the second or skill level follows. At this level is placed work in auditory and visual discrimination.

A. Codes.

During the first two weeks of school the students learned through a series of a half dozen lessons that gestures can stand for language, and lights and sounds can be used as codes for language, too. They learned about arbitrariness and order in codes by making up codes themselves using abstract written symbols (squares, triangles, circles, etc.) to stand for sentences, then phrases, then words. A treasure hunt using a series of these symbols followed. The number of abstract symbols was deliberately built up to overload the memory and at this point the teacher introduced a new code, the alphabet, based on the sounds of the language. There was no specific evaluation of the understanding at this time but several months later individual children were asked if they knew what a letter stood for and could give the answer-"sounds" or give specific sounds. The interest of the first graders and the further possibilities of such a series of lessons prompted us to plan a more specific sequence of lessons which were tried out on two kindergarten classes in the Spring. The results of this try-out are reported separately.

B. Pre-reading Skills.

To learn what reading skills the children had when they started first grade tests were given during the first weeks.[1/] An informal test, previously devised by the staff to discover which first graders could already read was administered individually. The materials for this test consisted of a large poster of a clown holding balloons. On the balloons were written

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[1/] All test data, samples of tests, instructions and completed tests are available in separate folders. Individual scores for all tests are listed in Appendix 7.

the words: dog, happy, hat, shoes, now, fat. Underneath the picture were two sentences: My name is Clappy. I am a clown. If the child could read the individual words and the two sentences, he was given a separate story printed with magic marker, saying:

I am a funny, fat clown.
I have big, brown shoes.
I have a blue hat.
Can you see my big,
    red nose?
Am I funny? Yes, I am.

One child read all the words and sentences, two children could read three-quarters of all the words, one could read half the words, and three children read five, three, and two words respectively; one child was a reader and five more children out of the 23 had some recognition skills.

We also administered the vocabulary section of the Binet individually. A score of five correct on the vocabulary equals age 6; a score of 8 equals age 8 and a score of 10 equals age 11 on this measure. The mean score for the class was 7.7 and the range was from 2 to 11 correct.

The group tests included a school administered New York State (Metropolitan) Reading Readiness Test and the Durrell Letter Matching Test for lower case letters.

The Readiness test included six sub-tests (Word Meaning, Listening, Matching, Alphabet, Numbers, Copying) The total scores produced a mean of 76.2 and a range of 47 to 92. Different intervals are given letter scores in this test to indicate amount of "readiness" for reading. The following table shows the range of scores for each letter grade, the "meaning" attached to each letter and the number of children who fell within the range. There were no D or E scores.

Table I

Reading Readiness Scores

			Range	N
A	Superior	(above 76)	78-92	15
B	High Normal	(64-76)	65-73	5
C	Average	(45-63)	47-60	3
D	Low Normal	(24-44)	--	--
E	Low	(below 24)	--	--

In the Durrell letter matching test the child must circle the one letter out of four on his paper which matches a letter held up by the teacher. In this task, 15 children made 30 errors: 14 children confused b-d. Other errors included g-d; h-n; l-i (three children); p-b (2 children); n-u; g-n; w-v; a-f; p-d (one child each). These confusions, especially the b-d, are the highly expected ones.

In general the tests indicated that the class was ready to read. The differences that existed, we felt, could best be handled in the reading and phonics program not in a prolonged pre-reading or readiness program.

C. Reading Whole Sentences.

While the individual testing was going on, the teacher proceeded from the Coding Unit into the first whole-class reading and phonics lessons.

As had been decided, the first reading experience was in the form of complete sentences.

During the period from September 15 to October 15 no reading texts were introduced. Instead, the children's own language was used and took the form of two group-written stories, each of which was the outcome of a classroom experience. A child brought two toads into the room. These toads lived in a terrarium for a week, and were examined and discussed daily. These experiences yielded the first story. (See Appendix 1 for samples of group stories). The second was the result of a movie on the monarch butterfly and a story about the butterfly which the teacher read parts of every day.

At the same time that the children were getting used to seeing their own words in print and learning to see separate words in sentences, the teacher began to write simple sentences concerning classroom organization or content, such things as the weather, the attendance, colors, classroom helpers, days of the week (See Appendix 2). These sentences were then put on oak tag and displayed on various bulletin boards, where they could be reviewed daily.

Differentiation Model Teacher-made sentences were permuted in several ways as they became more familiar, e.g., "My name is John." became "John is my name.", "This is Monday." became "Today is Monday." "This is a toad." became "What is this?". These lessons were taught to the class as a whole and children received individual practice in small groups after the second week. As a result of the testing, the small groups were also used to teach names and discrimination of letters to those who lacked these skills, and since phonics training had begun, the formation of small groups allowed evaluaton and further phonics practice on selected beginning sounds for those who needed it. During this period, and indeed until the middle of November, the make-up of the small groups changed frequently.

D. Phonics.

For the first two weeks of school, before any sound-letter discrimination had begun, whole class lessons and written exercises taught such concepts as left-right, top-bottom, same-different, and visual discrimination of letters. At the end of September, the first set of consonant letters, b-s-n-t, was introduced in sequence. Capitals and lower case were taught together. The child was taught to name the letter and recognize words beginning with the corresponding sound. (See Appendix 3 for rationale and sequence of letters) Immediately following presentation in initial position, these same four letters were introduced in final position. Houghton-Mifflin's Getting Ready to Read provided the major source of material at this stage.

These phonics lessons were taught in separate time slots but use of simple sentences and familiar nursery rhymes were included as media more in accordance with our postulates than was provided by the use of the H-M workbook alone. The nursery rhymes also allowed the work with rhyming to begin. At the same time, the group and teacher-made sentences occasionally lent themselves to analysis. "We have two toads." was fortuitous in introducing the initial sound of 't.' Unfortunately, too few of the reading sentences included the letter-sound combinations to match the phonic sequence, and even when they did occur they could not provide sufficient or varied enough practice by themselves.

E. Handwriting.

Although a few children seemed to have had prior experience with reading, writing skills were non-existent in September.

The teacher began by teaching formation of letters which were immediately put into words and very simple sentences, e.g., It is old. The Zaner-Bloser system was the one the school already used, along with large pencils and newsprint, on the theory that large-muscle motor co-ordination develops before small-muscle co-ordination. No change was made in the teacher's usual methods of teaching. (The sequence of letters taught was : o l d i t c a b e p g f j q h, m n r k v w x y u z s. Then the capitals in alphabetical order. All letters were taught by the end of October.) It was disappointing that the first graders' progress toward effortless handwriting turned out to be so slow. Our ideas for the use of writing for a variety of communication activities had to be postponed. At this first stage and for a long time it seemed, the writing was large, slow, labored and in some cases hardly legible. One could say that the progression of handwriting skill moves from abominable to merely terrible for a much longer period than one would think possible. This seems to be the norm, however, rather than the exception for first grade handwriting.

F. Literate environment.

Throughout the year a variety of techniques were utilized to create a literate environment in the classroom. Since the six-year-old's language in richness and complexity far outstrips anything he will be able to read for some time, we wanted to provide good literature for him to listen to, both to introduce decent writing styles and content and to give a good model of oral reading.

We wanted to emphasize the communicative aspects of reading which we did by titling bulletin boards, writing relevant statements during other lessons such as arithmetic and science, writing simple in directions on all worksheets, and in every way trying to permeate the school day with valid reasons for writing and reading.

One year long activity deriving from these notions was begun during this early period. On September 27th the teacher introduced the children to tape-recorded stories. The whole class listened to The Five Chinese Brothers and the teacher demonstrated how to turn the page of the book at the taped signal. After this each individual child, one or two a day, put on the earphones and listened while looking at the book. At this point, no real reading was involved but simply listening to a good story, and for a few children, beginning to see separate words and sentence punctuation. Listening to tape-recorded stories has been an integral part of the literate environment and we will reutrn to this aspect of the program again.

III. First Semester

A. Reading groups.

At the end of four weeks, having taught whole class lessons and checked on understanding through small group sessions, the teacher introduced the first reading text to small groups. The reading groups were established after an initial trial period of working with groups of about five children each day and rotating a child from one group to another until it seemed that certain children who could learn at the same pace were more and more appearing in the same group. A tentative top group of five children was formed on the basis of the test results which revealed certain strengths plus the positive responses and good memory displayed by these children in the early whole class and small group lessons. Gradually, in the next few weeks, others joined this group. Group membership continued to change from day to day as it was found that individuals needed more or less review, a slower or faster approach, or needed special drill in sound-letter correspondences, letter names or other preliminary skills. The observer's records of responses and errors in reading sessions were a major consideration in deciding group membership, as was the child's ability to attend. By early November there were three groups: Top Group = 9; Middle = 7; Low = 7 with some extra help being given two children in the low group.

B. Beginning reading materials.

We looked for texts in which the language sounded non-stilted. We wanted stories, for example, where contractions were used when contractions seemed natural, a variety of sentence structures occurred to give the text a certain literary style, and a good story line was present. We discovered that very little was available of this nature for beginning readers. As a first text we used the beginning books of a new English reading series called The Ladybird Key Word Scheme. The first two books in this series repeat the same 16 word vocabulary in a variety of ways. The third book allows the children to write answers to simple comprehension questions and to fill in missing words and letters in the text using the same vocabulary that occurred in Books 1 and 2. As pre-primers go, this one was a cut above most and after the first page or two the pictures very rarely cued the text directly. We liked the idea of using writing and phonics as tools which could be brought into close relationship with the reading task from the very beginning. All children read these three texts in small groups, at varying rates.

As part of the group lesson, the teacher introduced each new word separately before it was read in the text. Phrases and sentences were written on oak tag; these were read; the sentences taken apart, the phrases put together, and various phrases and words compared during each session.

Auditory and visual discrimination of initial consonant sounds were reviewed as well which provided an informal check on individual children's ability to hear and identify letter-sound correspondences which were being introduced in whole class phonics lessons. Oral reading from the text, mostly a-line-a-child, constituted the third portion of group time. During oral reading the teacher frequently provided a word when a child didn't say it or made an error. Since the reading was so slow at this point, continuity would be lost entirely without this help. Later, when more cues became available reliance on the teacher lessened but other factors served to make "teacher tells" one of the continuing sources of error correction during oral reading.

One reason for high incidence of teacher help in oral reading is the type of material we chose immediately following Ladybird. Since certain texts chosen as appropriate all contained too heavy a vocabulary load, they couldn't be used until the children had more power to attack words independently and had built up a few more automatic responses to frequent words. To provide materials to bridge the gap we used two strategies.

One was to find trade books which the children could read along with the teacher. Lessons were planned to allow the children to read selected words and phrases after listening to the teacher read the page. This method is very like Robert Allen's Read Along With Me technique but not so rigidly controlled. We tried it out using a trade book called Little Tiger Learns His ABC's (See Appendix 4 for lesson plans) in which cues are abundant. Each page is devoted to one letter and a picture cue is available. We took the occasion to test the children's knowledge of upper and lower case letters and their abilities to find words beginning with the same sound. Much to our surprise, the children were also able to "read" every sentence. To give an example - "He cruised on a crocodile and that was C.", "He insisted on ice cream and that was I". Gratified by the response, we followed this story by others from time to time during the year, sometimes taping the stories as well so that the children could listen and read as often as they wanted. At this time, the Little Tiger book was followed by a simple story called Cats, Cats, Cats which was presented on tape first.

Throughout the year the teacher noted that,in general, the students aren't stopped by unknown words or upset by difficult pasaages. The reason for this may be the early introduction and unthreatening nature of the read-along-with-me stories.

Our second strategy was to write a few simple, home-made stories. In deciding on a rationale for choosing texts we had been curious about certain shibboleths in the trade--whether each sentence must by fiat occupy one and only one line of print, whether the picture had to tell the story or be present at all. Observation by Project Literacy staff in a classroom last year (reported elsewhere) noted that because of the one sentence a line format in most pre-primer and primer level basal readers, the students get into the habit of dropping their voices at the ends of lines and continued to do so even when, in more advanced material, the sentence continued from one line to the next.

So, besides using the read-along trade books we wrote several simple stories, typed them on the primary typewriter and stapled them. We wanted to prepare the students to read Story Fun, a book with 124 different words, but decided to introduce in the home-made story words not only common to Story Fun but to any reading. The resulting story, My Pet, uses personal and relative pronouns, function words, the verb be, other common irregular verbs, and a few question words. The story is in the form of a riddle, and each page adds a detail to help the child guess what the pet is. There are no pictures; the language is colloquial; sentence structure includes statements, questions, compound and complex sentences; there is repetition but slight variation in form from one page to another; the story contains 41 different words, nine of which had been introduced before.

Next we adapted an old story called The House Where Nobody Lived. It was a fancier production since we'd learned something about bookmaking. In this story, we printed only one line a page and added blank pages to allow the children to illustrate each page themselves. After reading this story the children had been exposed to 30 more words (See Appendix 5 for the total number of vocabulary words introduced to date), and we felt they were ready to try a published text. (Beyond this point we no longer kept a record of the number of words or frequency of repetition in the reading matter introduced.)

Our attempts at story writing taught us something about the physical format we should have. We discovered that one line a page is too little since the children can't take advantage of what repetition there is by seeing the same word or phrase elsewhere on the same page, and, besides, the continuous turning of pages is boring, and takes too much time and effort.

The following table shows by date what materials had been read by the groups through December.

Table II.

Texts through December

Text	Group I	Group II	Group III
Ladybird 1a	10-20	10-20	10-27
1b	10-23	11- 1	11-18
1c	11- 2	11- 9	12- 1
Cats, Cats, Cats	11-15	12- 1	12-13
My Pet	11-18	12- 8	12-15
Little Tiger, ABC	11-30	12-15	
Little House	12- 7		
Is This You?	12-14		
Story Fun, primer	12-16		

We began observing certain students in the middle group with a view toward transferring them into the faster moving top group. The low group, however, was still struggling and two students in this group were not profiting from group instruction in any observable way. They couldn't seem to attend or remember. One of the two was listless, the other disruptive.

Toward the end of November these two, Rick and Rochelle, were removed from the low group and began working individually with the teacher in the Sullivan Programmed Reading Series. Beginning in January, these two children received extra review in the Sullivan book from a school supplied teacher-aide who spent 10 minutes each day with each child reviewing the pages the teacher had covered and, later in the year, going on to new material. Both children had interviews with psychologists early in the year, Rick with a private psychologist, Rochelle with the school psychologist. Rick had trouble discovering Gestalt figure-ground relationships and was diagnosed as having perceptual problems; Rochelle, they told us, was immature. Both psychologists agreed that very structured reading procedures be followed--so we continued using the Programmed Text and tried to individualize written work for these two students as much as possible.

C. Testing of oral reading.

Beginning in November each child read a passage with which he was familiar into the tape recorder. Beginning in January, two passages were read each month, one old or reading group passage, and one new, or previously unseen passage. New passages of one month tended to become old passages the next. We kept a record of the number of errors, type of correction, and the total time for reading for each child. These oral readings will also be used in an ongoing analysis of children's reading errors being conducted by a member of the Laboratory for Research on Language Skills. Results of the tapes will be discussed later.

D. Phonics.

1. Rationale. A rationale for a phonics program was worked out during last summer's conference (Appendix 3). By the end of September, the staff had specified a rationale and sequence of teaching more exactly for each segment and prepared some general teaching suggestions. The salient

aspects of the program are as follows: (1) a major assumption that both regularity and diversity be stressed at appropriate sequence points; (2) a concentration on the individual consonant letter with correspondences to one sound value; (3) a sequence of presentation which depends on visual and auditory contrast, frequency of use, and combinatory possibilities. Thus *b, s, n, t* are the first letters introduced and *w, x, v, z* are the last. The consonant combinations *ch, sh, th, wh* are included with the expectation that they will be responded to as one letter. Treatment of vowels differs. The vowels *a, i* are taught in CVC context (*bat*, *bit*) and then immediately followed by another value in which silent *e* acts as a diacritic (*bate*, *bite*). The program as of September did not include any morphological endings (e.g., s, ed, er, ing, etc.) or any variant pronunciations of consonants or vowels (e.g., *oi*l, a*ll*, o*c*ean, *Ch*ristmas). It was assumed that such things as tense, and plurals would be taught in conjunction with oral reading (as they were) and an advanced phonics program be prepared later if students were ready to deal with more complex sound-letter relationships.

2. *Sequence.* The suggested sequence was only partially followed. The suggested and the actual sequences are given on page 18. The first six suggested steps were followed in that order. These letters had been introduced and practiced by November 30th.

1. initial b, s, n, t
2. initial d
3, final b, n, t, d
4. medial a, i
5. a_e; i_e
6. sh, th

Suggested	Actual	Dates
7. m, p, h	7. m, f, p, h	December
8. medial o, u	8. g	
9. o_e; u_e		
10. medial e	9. w	
11. ch, wh	10. ch, wh	January
12. s_, f_, k_	11. medial o, u	
_ss, _ff, _ck	12. o_e; u_e	
13. y (cons) y (vowel)	13. k, c	
14. r, l, j		
15. _ng	14. medial e	February
16. qu_	15. qu_	
17. g, c	16. y	
18. w, v, z	17. l, r, j	
19. x	18. v, x, z	

The actual sequence of short-long vowels, consonants, and consonant digraphs had been presented by the end of February. The double consonants (_ss, _ff) were not presented formally. Incidental teaching in the reading groups seemed to have been sufficient for these children. The combination _ng was dealt with as _ing in the reading groups as a corollary to the morphological endings _ed, _s and _es. The letter w was presented sooner than suggested and was immediately followed by wh. These are very frequent initial letters in words introducing a question or clause (traditionally the "hard" first grade words) as well as in some common irregular verbs (want, went) and of course the pronoun we. The letter w, and after it g were introduced here because it seemed the children could get the most "mileage" from these two consonants at this point in their reading.

The vowels o, u were not presented as soon as suggested but followed the common consonants and digraphs discussed above. Instead of presenting g, c together, k and c seemed as natural a combination. Toward the end, the suggested and actual lists became more similar.

3. Materials. Besides the suggestions to the teacher for teaching procedures prepared in September, word lists for appropriate comparisons of CVC words and CVCV words were compiled. (These are available in separate folders.) Commercial materials used throughout the first semester included the Houghton-Mifflin Getting Ready to Read and the Continental Press Phonics dittoes. Continental Press Pre-Reading dittoes had also been used earlier for those who needed help with letter-matching and other discrimination skills.

Several sample whole class lessons are given below. These are taken from the daily records which are available for inspection.

October 4

(1) Teacher hands out capital letter cards to some children, says: "Bring your card up if it matches the one I put on the slot chart. Put it under the one it is like." Children name letters as they match. Teacher stresses that this is Capital T, etc..

(2) Teacher holds up letter, class names it.

(3) Getting Ready to Read, p. 4. Teacher says: "John, is the first letter a capital D? Joby, is the second ... etc." Teacher puts sequence of three letters in slot chart. Asks if they match the sequence in the first box on p. 4 of work book. One sequence matches. Teacher changes sequences in slot chart several times. Each time one of the three matches the work book. Finally, she puts up sequences, none of which match the model. Children tell teacher how to change sequence so that it matches. During work book section of lesson names of each letter are used.

October 21

Teacher writes on board Please find page 46. Asks Andy what the first picture is (goes through identification of first box of pictures.) "Does anyone notice anything about them?" Pupil: "All start the same." Teacher: "What is the first picture below the box?" Pupil: "Nest." Teacher: "Does it start with the same sound as needles?" Continues through all pictures. "Close your eyes and listen to these words--say them after me--how do they all start?"

October 25

Introducing letter b in final position: Children suggest words that begin with letter b. Teacher writes on board. Then teacher lists the following words: cat, rib, web, Bob, tub, sob, sub -- introduces each with a sentence. Asks children if they notice anything about the words. Several discover the similar ending. All children repeat the words--then close eyes and say them again--listening for /b/ sound

At end. Teacher asks: "What do they all end with?" Reviews initial /s/ using chart of pictures children made up. Asks for more suggestions.

In December and January we tested for visual and auditory discrimination of consonants. We used the Durrell tests for visual discrimination early in December and would have tested auditory skills at the same time but the test we had devised included faulty procedures. It was given after Christmas vacation. These two tests were means to be diagnostic. Specific teaching had occurred, and incidental attention to beginning sounds and letters went on in the reading groups. The purpose now was to see which children still needed more help and who could go on to other sound-symbol correspondences.

Visual Discrimination task - Teacher names letter; child circles it from a set of 4 letters. Results: One girl (Rochelle) made 9 errors; and 7 others made from 1 to 5 errors; b-d was confused three times, t-e twice; all other confusions, 18 of them, occur once.

Auditory Discrimination - Children listened to pairs of words and decided if members of the pair were the same or different. Pairs were exactly the same except for initial sound (e.g. few-view). The pairs tested were:

p	t	k	f	e	s	š	č	l	m
b	d	g	v	ð	z	c	ǰ	r	n

Results: 11 students made on the average two errors. Half the class made no errors. The following pairs were given as "same."

	f.		f.		f.		f.
m n	7	č ǰ	4	b p	2	t d	2
f v	4	e ð	3	s z	2	k g	1

E. Literate envoronment.

1. Typewriter. Two primary electric typewriters were lent to us by the Smith-Corona-Marchant Company for the months of October and November and one was purchased for the remainder of the year.

Teacher and Observer use. The teacher and the observer used this typewriter to produce class stories, worksheets, home-made books and test materials. During the first month the observer was able to evaluate different children's knowledge and recognition of letters and their names, via activities described below.

General remarks. The typewriter was located on a separate desk at the back of the classroom. Each day names of several students were placed on the chalkboard to indicate it was their turn to use the typewriter for about 10 or 15 minutes. The child was shown how to insert the paper, turn the typewriter on and off, and use special keys, as the space bar and the shift key. The observer suggested activities, worked individually with some children, took notes and evaluated each session, and generally supervised the activity. After a few weeks the keys were covered with the lower case letter forms, since the children had been taught to recognize and write lower case forms first and some children did not recognize capital letters.

Child use. The type of activity suggested by the observer to the child depended on his level of reading skill, his previous activities at the typewriter, and the notes and recommendations which were kept on each child's 'turn.' We made an effort to give each child some continuity and review as well as variety during his typing time. The child usually was given a choice of several activities but was free to pursue an interest of his own if he liked. The following list of activities includes the ones most often done by the children. They are listed in general ascending order of difficulty. (Samples of children's typing are available elsewhere)

a. Matching letters: Children were given a ditto on which a number of letters were typed. Children tried to duplicate the line of letters by finding each letter on the typewriter keys and typing it underneath the model. Sometimes children would type a line of lower case letters and then using the shift lock would type the same sequence of letters in their capital form. This helped to reinforce pairing of the two forms.

b. Letter identification. A sequence of letters ditto was also used to give practice in identifying letters and naming them. The letters on the ditto were the ones which the children had been studying in their phonics lessons. For this activity the observer sat next to the child and as he found each letter and typed it under the dittoed letter, the observer would ask if he knew the name of that letter. The letters which each child did not know were noted and frequently the observer wouldpoint to those letters again or ask the child to name them as he retyped the line in capitals.

c. Typing own name. For children who knew very few letters and had trouble matching letters, the observer would type the child's name at the top of a piece of paper since presumably the letters of his name would be more familiar to him. Then the child would match and learn the names of the letters in his own name. This also seemed to be a very interesting activity. Other children were encouraged to finish the sentence often typed at the top of their papers: My name is _____________.

d. Copying single sentences. Some children had trouble copying sentences from books or bulletin boards because they could not retain the image of the letter in their minds long enough to look away from the book and search for the letter on the typewriter. Looking back and trying to find the place in the word they were copying was also difficult. Thus the observer typed a sentence dictated to her by these children and then they copied the sentence, matching letter to letter, much as they had done on the Letter Ditto.

e. Copying sentences, paragraphs or stories from books. A good many children from the beginning of school to the last month seemed to enjoy typing pages from their favorite books. Although this activity was not as creative as others done later, it was more difficult than the ones mentioned above. The child had to retain an image of each letter of the word during the typing and children increasingly were able to look at the word once and then type out the whole word or several words at a time. This activity also helped some children realize that words are bounded by spaces and that some words contain smaller words within them.

f. Copying arrangement of phrases on slot chart. Children were given a slot chart and phrases from their reading book that could be arranged to make a number of different simple sentences. Children were told to make a sentence and then type the one they liked best on the typewriter. An example of one such sentence typed is the following: Jane is in the shop and Peter is in the shop.

g. Use of picture dictionary. A picture dictionary was kept in the desk on which the typewriter was placed. Children sometimes used it as an activity in itself, copying 'b' words or making up sentences using 'b' words. Other children used the dictionary as a reference for looking up the spelling of words they did not know.

h. Sentence or story completion. At the end of November, four different incomplete 'stories' were dittoed. (Most of these were composed of words the children had had in their reading.) Children were helped to read the first part of the story and were then encouraged to make up endings for them. An example of one incomplete story and the child's completion of it is the following: What do you want for Christmas? I want a toy train, a toy truck. The observer often typed questions to the child and encouraged him to type out his answer. An example of this is the following typed interchange: What is your name? My name is Richard Drake.

Motivation. It is interesting to note that many children who would not sit down at their desks to write sentences or stories would do so at the typewriter. It may be that the children's interest later in the year in copying stories and writing and illustrating their own sentences or stories at their desks stemmed from their experiences doing these activities at the typewriter. (In fact many children who asked to type a story when it was not their turn were encouraged to do it at their seats by writing instead of typing.)

Comments on procedure used. Although the observer handled the entire set of activities with the typewriter, it is possible that some modifications could be made in the procedure to enable a regular classroom teacher to manage alone. (1) Children could have a general introduction to the typewriter and the rules for its use as a group. (2) The teacher could show the first child individually how to insert the paper and how to use certain keys. That child might be able to help the second child with these simple procedures that really need to be individually practiced. (3) A set of suggestions for activities graded as to difficulty could be set up and the children encouraged to proceed through the exercises at their own rate. Brighter children might be started farther along in the sequence. It has been the observer's experience that children need and want a few suggestions and a little guidance in deciding what to do (and what they can do) with their time, as long as they have some choice and the freedom to follow up their own ideas if they have some. (4) A permanent chart could be placed in the room with the children's names on it and spaces for checking turns. Each day the teacher would need to pick out the four or five names next on the list and write them on the board at the beginning of the morning. She could check off those that took turns at the end of the day.

2. Tape recorder. A few days after the initial presentation of The Five Chinese Brothers, the observer began to select a few children each day to listen to this story individually over earphones. At this point only one set of earphones was available.

It seemed that the pacing of the story didn't allow enough time to look at pictures and words. The text was quite dense (from three to ten lines per page) and non-readers would have trouble following this text in any event.

The next books selected usually contained one or two lines of text per page. In the taping more time was allotted between pages and reading was slower but not to the point of losing normal intonation or story plot.

In presenting these stories to the children, the observer first showed the child the title and a few central words that recurred on many pages (such as good night in Good Night, Mr. Beetle, and millions in Millions and Millions and Millions). She then told the child to look for those words as they "read" the book. The children were allowed to listen to the short stories two or three times and for some of the easier books, the observer read through the book with the child afterwards. (See Appendix 8 for books that were taped.) In this manner, seven different "easy" stories were taped for individual listening by December. One of them, Is This You?, contained instructions for drawing and labelling pictures at various points in the text.

III. The Second Semester

A. Reading groups.

1. Materials. After the early read-along and home-made stories we moved into printed texts. The material we found to be suitable came from texts which are supplementary to certain basal series. Some of these are called literature series and are meant to be read after the basal. Frequently these books contain many folk and fairy tales as well as some poetry. There is a certain stylized form in fairy tales and the natural repetition inherent in the genre served our purposes. Several stories were repreated in slightly different forms in some of the books and this allowed the children to make a few critical judgments and choices. We also continued to use trade books occasionally especially with Group I.

Later in the year, after the children had been reading published texts we wrote a story meant as a quick vocabulary review called Another Pet Story and still later, disappointed by the text of three beautifully illustrated fairy tales, (Ugly Duckling, Billy Goats Gruff, Three Bears) we covered the text and wrote our own.

The chart on p. 30 shows by date what materials were read by the groups from January through May. Group IV, Rick and Rochelle, are not included. Their progress through the Programmed Reading by dates is presented on page 29.

Table III

Texts: Special Group

Text	Rick	Rochelle
Prog. Pre-Reading	12-15	12-15
Cats, Cats, Cats	1- 3	1- 3
Primer	1- 6	1- 6
Book 1	2- 4	2- 4
Book 2	4- 2	3-20
Book 3	5- 6	4-30

Table IV.

Texts: January to June

Text	Pubiisher	Dates Read by Groups I.	II.	III.
Little Tiger, ABC (trade)	Golden Press			1-10
Little House (staff)			1- 3	1-20
Story Wagon, 1st	Singer			1-25
Story Fun, primer	Singer		1-12	2-14
Chandler Series (5 Booklets)	Chandler			3-15
Once Upon a Time, primer	Row-Peterson	1-11	2- 1	4- 8
Wishing Well, Primer	Row-Pererson	1-28	2-22	
Tales to Read, primer	Laidlaw	2- 2	2-14	4-29
I Know a Story, 1st	Row-Peterson	2-10	3-10	5-13
Stories to Remember, 1st	Laidlaw	3- 7	4- 6	6- 3
Merry-Go-Round, 1st	Merrill	3-15	4-20	
Storyland Favorites, 2nd	Laidlaw	4-19	5-13	
Pets Around the World, 2			6- 6	
Come Along, 2^1	Houghton-Mif.	4-29		
On We Go, 2^2		6- 6		

Other trade books used for only one or two sessions were:

Grade I	Grade II	Grade III
1-18 King, Mice, Cheese Reader's Digest 2- 7 Part A 4- 5 Part B Part 1	1-11 Is This You 2-11 Three Bears (staff) 6- 1 Reader's Dig. Part A	2-11 Three Pigs 2-21 Hop on Pop 4- 4 (review) Hop on Pop

Of the texts, Wishing Well seemed less interesting than the others. It was the only text that concentrated on here and now, just like me, everyday occurences. So it wasn't used with the slower readers who need more motivation to read rather than less. Merry-Go-Round, although excellent in every respect, was very difficult. Errors increased when it was introduced. If used again, this book should come at about a second grade level of mastery. The Chandler Series are comprised of small booklets, illustrated by photographs of San Francisco children of several races. Each booklet concerns a different activity, e.g., slides, swings, supermarkers. The text is supposedly taken from actual comments made by children. This year we used these booklets to consolidate the gains made by our slow readers before letting them move on to more difficult material. But these texts may also be appropriate to use as beginning reading material.

Of the trade books Is This You did not lend itself to group instruction nearly as well as it did to taping and individual listening. Group III did not use this book for instructional purposes.

Observation of reading groups. Our observer usually sat in with two reading groups each day and recorded specified data. We devised an observation sheet which provided space for content of lesson, time, assignments, individual pages and lines read by each child, and any errors made with a notation as to the type of correction of the error. (See Appendix 9 for sample observation forms) As a result we have a day-to-day record of the progress of each group and each child within the group. The average instruction time in minutes for each group is given below. (We include these figures because observation in a public school classroom last year found that top group children invariably received more of the teacher's time. Those averages for top group to low group were, respectively: 22 minutes, 19 minutes, 14-to 18 minutes, 15 minutes.)

Table V.

Average Reading Time Per Group

Date	Top	Middle	Low	Special (Rick and Rochelle)
Nov. 1 - Dec. 2	17	16	15	17
Dec. 6 - Jan. 7	18	14	19	15
Jan. 10 - Feb. 4	24	18	22	12
Feb. 7 - Mar. 25	22	20	20	13
Average	20	17	19	14

In February another continuing group was formed for review in phonics and included several children from the middle group and those in the low group. This group met for approximately 10 minutes a day, in addition to their reading group time.

2. Grouping. The grouping of students has been flexible but not heterogeneous; children were grouped by attempting to discover who was moving at the same pace and who needed the same kind of review. At times students would read simultaneously with two groups, or move to one group for extra phonics practice only. When it seemed that a child was ready to read at a faster pace there was no problem transferring him from one group to another. We believe this was due to the type of materials used, the lack of emphasis on memorization of words as a prerequisite to group membership, and

the fact that the program for all groups stressed a variety of available strategies to help read new words.

The fact that several books at the same level but from different publishers were used in succession made it easier to move children from one group to another. The vocabulary load varies from one book to another but is never as high as a book at the next higher level. In this way a child with less reading experience could move to a group who had more experience in reading.

In deciding to place a child in a higher group we relied on daily observations of oral reading, daily written work in phonics and comprehension, results of monthly taping of oral reading, and informal diagnostic tests. In observing the child after he had moved to the new group, daily observation records were discussed at the teacher's meeting, written work examined and the oral taping compared to others in the new group.

3. Activities during reading groups. As the year progressed, procedure for handling the reading groups diverged. At first all groups discussed and read each story orally. Written comprehension questions to be answered individually followed. The slowest group continued with this procedure but the top group would occasionally read a story silently and during group sessions discuss this story and then go on to the next. Sometimes they would begin a story in the group and finish it at their seats. This procedure was also followed with the middle group but not as frequently.

The agenda varied from group to group and from time to time. For the first few months the teacher pre-taught and reviewed vocabulary via word cards and phrase cards. Because we were interested in the child's ability to deal with different sentence structures these word and phrase cards were also used by the children to build new sentences. (Samples of these are available elsewhere) Time was spent in each group reviewing the phonics lesson that had been introduced to the whole class earlier. Any new reading or phonics games were first introduced and "played" in these groups. Frequently the last day's written assignments in phonics or story comprehension were handed back and corrections made during the period.

For several months, the top and afterwards the middle group spent the last five minutes of the instruction time on riddles we had culled from Bennett Cerf riddle books (and a few from the Opie's Lore and Language of School Children). These were dittoed and cut up into individual sets. Two or three were passed out each day to teams of three children within the group. When the children had figured out how to read both the riddle and the answer, a member of their team read the riddle to the others and everybody tried to guess the answer. Each child got a copy of 'his' riddle to take home and try on his parents. The children enjoyed this activity immensely even though the words were difficult, but after a couple of months we had exhausted our supply of riddles.

Another activity was used with all groups to check on the children's understanding of the structure of sentences and to train them to watch for semantic content. We made up sentences for each group which got labelled 'goofy sentences'; they were actually either syntactically or semantically anomolous (Appendix 6. For example: Peter was so happy he began to cry; How many is those?). Each day the teacher would write one or two on these on the chalkboard and ask someone to point out what was wrong. Then the children would decide how to change the sentence so it would sound right to them.

But with all these activities, the major portion of the time was still spent on oral reading.

The chart below shows the percentages of time spent on various activities during the reading group period for the months of January, March and May. These times may not reflect a completely accurate picture since they were not randomly drawn but were derived from those days the observer happened to sit with the groups. Each reading group (Rick and Rochelle excepted) is given separately. Very short periods are not noted.

Table VI.

Percentage Division of Time Spent in Reading Groups

Activity	Oral Reading			Phonics			Flash Cards			Discussion			Misc.		
Group	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Jan.	65	52	42	0	0	23	16	8	15	17	13	15	2	27	5
Mar.	76	49	41	15	14	45	0	0	0	2	20	0	7	17	14
May	55	86	72	33	13	26	0	0	0	12	1	0	0	0	2

As can be seen, the time given to oral reading varies but always remains high. The use of flash cards for word recognition was wholely discontinued after January and no 'new' words were pre-taught. We reasoned that more cues would be used by the child in this way. The percentage of time for phonics is higher over-all for the third group until May when additional phonics training was being given to them separately and the first group was receiving more advanced phonics during the reading period. The miscellaneous category includes activities related to reading such as writing on the chalkboard, studying phrases, spelling, reading done by the teacher, introducing a new book, or correcting worksheets.

B. Free time activities.

The reading period usually lasted most of the two hour morning session with breaks on three mornings for specialists in music and physical education and the usual 15 or 20 minute recess on Monday and Friday.

Since the teacher spent between 15 and 20 minutes with each group, in effect, the children were without direct teacher supervision for an hour and a half on most mornings. This is the usual procedure in any system using reading groups. Children not engaged in reading with the teacher are generally given enough written work to keep them busy profitably and independently during the period. "Seatwork" has been widely criticised as being "busywork" but the problem is a real one and not easy to solve. Teachers are constantly looking for a variety of materials that children can work on independently. We were particularly interested in using this time for language arts activities that would not just keep the children busy but reinforce and augment current learning, or allow a child to move in independent directions. The choice of free time activitees in great measure resulted from our attempts to provide a literate environment.

1. Written work. (a) Reading comprehension and Phonics. Each day the teacher gave out and explained two or three worksheets; some for the whole class, e.g., an arithmetic or phonics paper; some for individual reading groups; e.g., comprehension questions on yesterday's story, or work on grammatical tags (noun, verb endings, etc.). Frequently a fourth coloring paper with written directions was available to those who wanted to do

it and had the time. (Samples of written work are available in a separate folder.)

Some of the written review in phonics was provided by the Continental Press ditto masters. Quite a few of these were set up so that in a multiple-choice situation the phonic cue alone provided the answer. The top group used this company's new Reading Thinking Skills which included work in classifying words into subordinate and superordinate categories, working with analogies, and finding pronoun referents. In the late spring the top and middle groups completed selected SRA phonics check tests.

(b) Crossword puzzles. One written activity grew out of a game the observer played with Richard, our pre-school reader. She prepared a simple crossword puzzle for him and soon he asked for another to do. After several of these, he prepared one for her. This went on for some time and gave us the idea that his reading group might be ready to profit from this activity. The observer prepared and dittoed a number of crossword puzzles which were first presented and completed by the whole group and later done individually. The top and later the middle group each completed several of these.

(c) SRA lab. The SRA lab, a primary reading lab, was provided for independent work. This lab had short selections printed on heavy paper accompanied by comprehension questions. Seven levels of reading varying in difficulty from grades 1 to 3 are included in the lab. Each level has approximately 20 selections and each is color coded.

Early in the fall we showed Richard, who could already read, how to work through the SRA materials by himself. Gradually, we introduced them to other children. The procedure was for the observer to work with each child for the first two or three selections including the questions. After that the child was free to continue at his own pace. When he had finished reading and writing his answers he brought them to the observer who corrected his work. Any paper with errors was given back to be corrected before the next selection was read. This imposed somewhat closer control than the SRA manual indicates. Children are supposed to read a selection, answer questions, correct their own answers from a key, and go on to the next selection. We felt that most of our first graders didn't have the skills to benefit from complete independence yet.

By January students in the top group were using the SRA lab. In February and March the middle group began, and toward the end of April for of the five slowest readers were introduced to the lab.

Interest in this task has been sporadic. Usually, during the first week a student may do as many as 10 or 15 in a set. Some weeks can go by without a particular child doing any, but eventually another spurt of interest occurs. And, of course, two or three children never did become interested at all. The levels themselves are unequal in quality and the second and third levels have ambiguous questions. Children's production slowed down when they reached these levels and one or two who could handle harder material were allowed to skip to the next higher set. By the end of May children were reading anywhere from Level I to Level V.

This independent reading work can be profitable for children. We can rewrite the comprehension questions for levels II and III and plan to allow children to move more quickly to advanced levels if they seem bored at a lower level. But this may cause other problems. For instance, moving more quickly through the selections may not increase motivation for the child so advanced and may be discouraging for the child not allowed to advance.

C. Literate environment.

1. General comments. At no time were there less than 30 trade books along the back window ledges for the children to read. They were borrowed from the school library, the central school system curriculum library, or provided by us. These were changed throughout the year. In March we added several basals at primer and first grade level to the class library. One hour a week was set aside as a library period. The teacher read stories aloud almost every day and frequently children read favorite stories to the class. Several anagram sets were available and children used them to make up words and sentences of their own choosing or tried to duplicate sentences from a book. We provided phrase cards in small display racks so that individuals could work in teams finding a number of different ways to combine the phrases into sentences. Later, these little slot charts were attached to envelopes containing words which could be combined to make many different sentences. Other home-made games for matching letters, identifying colors and numbers, were used as well.

2. Message board. We had hoped to allow the children to engage in many types of communication activities. Because of poor handwriting skills, these activities were curtailed with two exceptions. One was the use of the electric typewriter which by mid-year had moved away from being a tool to teach letter matching and sound-letter correspondences to functions we will discuss below; the other was the initiation of a message board.

By January most of the children could write at a reasonable speed, with small enough print and acceptable legibility. We decided to initiate at least one writing procedure, where written communication could take place from student to student, so we set up a "message board" in the back of the room. At first the teacher primed the pump. She reminded the class of birthdays, wrote that a reading group would get a new book that day, asked who was the tallest boy in the class, and soon individual children began to respond in kind. On January 24th, she wrote "Do you like all this snow?" which got lots of signed "Yes, I do -- No, I don't." responses. When she wrote "Who will have the neatest paper today?", Dan responded, "I'll try."

Although the teacher continued to write one-liners, the children began to use the message board on their own. Linda let everyone know about her special day with, "I am seven today." Joni inquired of the others, "Do you like your part in the play?" Once or twice after school dates were made: "Jana - can you come to my house?" "I'll kall you - Jana." They wrote to ask the teacher what was going to happen in school that day, or ask her if she had had a nice vacation. Results of individual work at the typewriter were occasionally displayed on the message board including several original "poems." Letters from children out sick, to other classes, etc., were displayed as well.

This was a useful motivating device for several months, and highly motivating for some children. The response continued to be good from a few for an even longer period. The message board should either be considered a short term device, or more variations introduced to keep the children interested.

3. Typewriter. Early in the second semester, the lower case letters were removed from the typewriter keys.

Children still continued to use their typing time to copy sentences out of books and to do some of the other activities introduced earlier.

This now included copying riddles to put on the message board. However, many children, especially the better readers, were encouraged and, in fact, did do more independent and creative things at the typewriter. Some children typed messages to other children, some typed poems or stories - original, memorized or copied - and others typed out their parts in the play or letters to relatives.

One poem composed by a child and typed is the following:

As I went walking I saw a cat.
She said meow meow and then she sat.

Another different activity used later in the year to prompt children to write more creatively, was the typing of identifications and descriptions of funny and ambiguous line drawings made by the observer. One child chose a picture and typed: A dog wanted to play dressup. To the same picture, another child typed: They are animals trying on hats. Other responses to these stimulus pictures included: This is a design with four stars. This is a circle that never stops. Here is a woman with long hair all over the world. A bear and a duck were swimming in the sea.

Some children used the typewriter to complete work in other areas. Many of the children who used it in this way completed the answer sheets for SRA supplementary reading.

A few children who were having a good deal of trouble with their handwriting refused to do the SRA supplementary reading because of the written work required after the reading. However, they were quite willing to do the reading when the observer suggested that they type their answers to the questions. In general all the children seemed to enjoy the activities at the typewriter and eagerly awaited their turns.

During this part of the year, most children were not supervised at all and except for writing the list of children whose turn it was to type, reminding some children that it was their turn, and spelling a few words for them the observer was free to do other things.

4. Tape recorder. In January the tape recorder was adapted for six headphones and the tape recorder itself placed adjacent to a small table at which six children could be seated. Each child was provided with a book to accompany every taped story. In addition to our own tapes, we sent for a tape of four stories recorded at Wayne State using several male voices. The Wayne State tape did not have a signal for page turning, so its use was delayed until some children were able to do without this cue.

Children were shown how to turn the tape recorder off when a story was finished and the child nearest the recorder usually performed this function, freeing the observer from the need of supervising the activity continuously. After the multiple earphone arrangement was set up as many as 12 children a day were able to hear a story on the tape recorder.

In practice the number of children listening each day varied. Several days each month the tape recorder was used for individual oral reading taping and at one period a pilot study in phonics was taped. Listening was also curtailed because of other duties of the observer, occasionally a machine break-down (a switch from Scotch to Audio tape helped), and other activities going on. Usually, children were asked to complete required seatwork before participating in any other activities. An exception to this rule was made for children who were so slow finishing written work that they would never have been able to listen.

By the second semester, many children still did not follow the printed text. Even though just having the child listen to good stories fulfilled some of our purposes, new procedures were tried which we hoped would encourage children to look at the words. One book that had a question and answer format was recorded with only the questions and then a pause. The children were to try to answer the question by reading the page with the answer to it. Two stories were recorded with key content words omitted. The children were told to follow along and try to read the missing words. Taping of stories without a cue for page turning was another inducement to attend to the text. Frequently the observer sat with the children during these special recordings in order to stop the recorder and relisten to a page if no one could read it. Additional uses are summarized below.

(a) Good literature and a model for oral reading. Most of the books selected are excellent picture-books. It was felt that no matter what additional reading skills were picked up, the children would benefit from spending their free time with an interesting, well illustrated book. The earphone set-up allowed the children to concentrate on the book without the distraction of a normal busy classroom. It was hoped that the children would benefit from hearing books that they could potentially read, being read with good intonation. A technique was also used to call this aspect of reading to their attention. A few stories were recorded two ways -- first with a monotone voice and the second with expressive intonation. Children were told to listen to both versions and decide which way they liked the story read. The observer, after listening to the children's opinions asked them why they thought they liked it that way. It was found that children could easily say which way they liked to hear the story but had a hard time expressing the reason. (i.e., "You sounded as if you liked the kitty better in this one") The observer helped the children to draw the conclusion about good intonation.

(b) Scanning practice. It was felt that if a child could follow the text at the same rate as a spoken voice, he might be led to begin scanning the line and stopping at punctuation. If this did happen, it was probably only with the better readers since they were the ones who did look at the words consistently and whose automatic responses to the text were developed enough to be able to do this scanning.

(c) Vocabulary building. Originally it was hoped that children's sight vocabularies might be expanded by hearing and seeing words a number of times. As has been mentioned, specific routines were designed to get children to look at the text,but since these particular stories were not the most frequently done (because of the need for the observer's continuous presence), we are not optimistic about the number of words that were 'learned' this way. However, we feel children were encouraged to try to read the books later at their seats and because they remembered the story they were helped to read some words that they could not before.

(d) Aid in introducing book to reading group. As one means of building up vocabulary the tape recorded text of Grace Skaar's book, Cats, Cats, Cats was played for the children in their reading group while the teacher showed the group the pictures. The group then read the words of the book without the tape recording. Finally children were given a copy of the text of the book which they read and then took back to their seats to illustrate.

(3) Whole group listening activity. The tape recorder was used a few times to "read" a story to the class. The teacher or the observer

showed the pictures. It was observed that the children were even quieter listening to a tape recording than they were to the teacher reading. The tape was also used as a script for slides shown in conjunction with the revised coding unit.

(f) Original stories. About half the children participated in a story telling activity in which they looked at the pictures in a book a few times, and then made up a story to go along with the pictures. These stories were tape recorded and transcribed and dittoed by the observer on the primary typewriter. Some children got to look at their stories and listened to their voices telling the story. Others read their stories to their reading groups or to the class. The children enjoyed this story telling immensely and are especially fascinated by listening to their voices on tape. If the activity is repeated it is suggested that the children be taken to a separate room for the recording, since the background noise in the classroom at the time of recording made playing the tape to the class later on impossible.

(h) Pre-reading and reviewing books read in groups. Books that were to be read in reading groups and books already read were recorded and played for the children a few times. The response to the review stories was negative and children seemed very disinterested. This might have been because the book needing review at that time was really less interesting than books ordinarily heard on tape or because they were just tired of them. It should be noted on this last point, however, that other tapes of trade books were repeated with some children toward the end of the year and they seemed to enjoy them almost as much as the first time.

Suggestions for use by the classroom teacher.

1. A classroom teacher might be able to manage this facility

along with the other classroom activites by setting up the tape and books before the children arrive in the morning. As she assigns work or finishes with a reading group she can allow six children to listen to the tape at a back table. Children are able to put on the earphones and turn the tape recorder on and off by themselves. Tapes and multiple copies of books must be available and ready for use.

2. There are a good many stories that would be ideal for taping, even early in the year -- Inch by Inch by Leo Lionni, How to Hide a Hippopotamus by Crosswell, Flip and the Morning by Dennis and Billy's Pictures by Rey are just a few simple but good books that might be used.

3. More use can be made of the tape recorder for children's creative stories. It is possible that this could be done in a group situation, but to be really successful with first graders the participating child probably needs individual attention during this activiiy (i.e., he should tell the story to somebody--not a machine.)

D. Language Structure.

No formal lessons were taught, but a variety of material was used to take advantage of the oral language structure the children already had. In the beginning, simple sentences were permuted. When the children began in textual material they were encouraged to build new sentences from those given in the text by using phrase cards and word cards. Later the teacher used 'goofy' sentences to check on structural and semantic understanding. The textual materials and the taped stories contained a variety of sentence patterns including compound and complex sentences, phrases, fragments, inversions, etc. In February the teacher introduced as a writing lesson the technique of putting a half finished sentence on the board and asking the children to complete it in any way they chose. The completions were sentences of varying complexity but all were semantically reasonable and structurally sound. Here are some examples of the sentences begun by the teacher:

1. Peter was ________
2. Tom had __________
3. Once I saw _______
4. Did you know _____
5. I looked out the window and ___
6. It was quiet when suddenly ____
7. Mother said __________________
8. Once upon a time ______________

E. Phonics

1. Blending. By February there were still students who were looking at a word and trying to sound each letter separately without success. Some students had never used an overt blending strategy, i.e., "sounded out" a word; others had used it or a variant of it and had internalized the process within a short time. We observed the reading groups to see who had this 'blending' ability; those who seemed not to were specifically tested on some trigrams. Five students were unable to look at a word and sound its separate elements. Our observer worked with each student individually for five minutes a day for a period of 10 days, using a different technique with each student. These techniques are discussed below.

(a) Instigation: During the first weeks of the phonics subroutine when a more synthetic phonics approach was beginning to be tried with the slower children (around the beginning of February) the observer noted that some of these children plus a few of the children from the middle group were having trouble blending the individual letter sounds so that they could recognize the word. The observer decided to see actually how many children were having trouble in this area and to try out some ideas for helping children with this problem.

(b) Test phase. Six one syllable words made up of regular letter sounds that the children had been taught served as the test measure. They are as follows: bat, am, sad, dim, fan and sip. The words were typed on the primary typewriter on a piece of paper, one under the other. The observer covered up the words not being focussed on with a piece of paper. Children's responses were recorded on tape and scored later. If a child had trouble reading a word, he was scored on the following three questions: 1. Does he try using phonics skills to figure out the word?, 2. Is he able to sound out the individual letters correctly?, and 3. Is he able to blend the individual letter sounds? If children did not attempt to use phonic cues the observer asked them to try to sound out the word. If the child did not know the sounds of some of the letters the observer told him the sounds and asked him to put them together. The reason for scoring the three questions was to give us some idea of each child's exact problem. However, the only children used in the exploratory phase were those unable to blend letters. Five children, four in the lower groups and one in the middle group were found to have difficulty blending the sounds of the letters. A sixth child had some trouble, but was not used in the investigation because of some special problems.

(c) Exploratory investigation. Because we weren't sure which specific procedures would best help children with a blending problem, all the approaches that could be thought of were considered. It was decided to try four different techniques. They are briefly described below:

1. Auditory practice. The child listened to normally spoken CVC words and picked out the beginning, middle and ending sounds in turn. Then the child listened to a word spoken in two parts,(CV-C or C-VC) and was then asked to say the word normally. Then the child listened to the observer sound out all three letters in a word and tried to guess the word. If he could not say what the word was when it was completely broken down the observer went back to the two parts described above. The observer also had the child mimic sounds she pronounced.
2. Blending the initial consonant and the vowel. One child was asked to sound all the letters out and then go back and put only the first consonant sound and the vowel sound together. He was then told to hold on to the vowel sound and add the final consonant sound. Later the child was encouraged to skip the first step of sounding out all the letters of the word. Words initially were arranged in sets in which the first two letters remained constant (sat, sad, Sam) to help the child get in the habit of treating the initial consonant and vowel as a unit (and thus eliminating some of the distortions that may have caused the blending problem in the first place.) Another early procedure tried was to have the child look at the word, listen to the observer sound out and read the word, and then say whether or not she was right. If the observer was wrong, the child was asked to supply the correct word.
3. Blending the vowel and final consonant. This procedure was handled like #2 except for the fact that the child was encouraged to blend the last half of the word. This procedure was tried because he seemed to be having more trouble with that part of the word. He was then instructed to go back and add the first consonant. Rhyming words were used initially

such as sat, bat, fat, mat. The problem with this approach is that left-right progression is violated and the children may learn a habit that later will need to be broken.

4. Word parts: teaching consonant vowel combinations. This approach resembles the approach used in phonics many years ago and is also similar to #2 above. It involved having the children read a series of consonant combinations with a single vowel (such as ca, ta, ba, ma). The observer would then go back to each combination and add a final consonant to make it a word and have the child read it.

Since it was felt that perhaps the primary reason the children could not blend letter sounds was that they would not recognize a word if there was much distortion of it, the observer made a point of, for example, not voicing voiceless consonants and correcting the children in this regard when they sounded out words themselves. The function of many of the other procedures was also to help cut down the distortion of the individual sounds of words, as well as to give the child practice in both listening and blending.

(d) Conclusions. A real comparison between techniques cannot be given for this exploration since the subjects' reading ability varied initially quite a bit; because each technique was tried with only one subject; and because other phonics work was being done concurrently by the teacher. The only sure thing was that all five children at the end of three weeks (and about six lessons) could blend words that were sounded out. Children also seemed to enjoy the 'games' and asked to continue them after they had been stopped. We feel fairly confident that the blending problem can be overcome -- probably most effectively by a combination of techniques. It is recommended that a more controlled study be done next year either with younger non-readers or first graders at the beginning of the year, to explore the relative benefits of these and other specific techniques.

2. Testing. In March home-made and published tests were given as diagnostic instruments to learn which skills individual students were lacking. Spelling. 12 words were pronounced, used in a sentence, and pronounced again. They were: dog, man, sit, pet, bus, name, like, the, come, have, was, we. Of the 12, seven were phonically regular according to the program taught this year, five with medial short vowels and two with silent _e. Five were taken from common spelling lists. These last five were words which should have been visually familiar to the children from their reading. The 65 spelling errors (possible 276) can be categorized into short vowel words, 19 errors (7% of total or 12% for this category), long vowel words, 13 errors (5% of total or 30% for this category), and irregular words, 33 errors (12% of total or 20% for this category). (See Appendix 7 for test information.)

Roswell-Chall. The Roswell-Chall test requires children to pronounce single consonants, consonant clusters, long and short vowels in isolation, and sets of words and short sentences exhibiting various kinds of regularity. All children were given these subtests individually but some subtests were not attempted with all children. The results indicated that the low group knew the sound correspondences for the vowels a, i but not e, o, u. They knew most of the siggle consonants except the letters y and g which can be confusing in isolation and v, a relatively infrequent letter. They consistently made errors on consonant clusters, and long and short vowel sounds in word pairs.

Results of the Rosewell-Chall for the middle and top groups indicated that they could identify short vowels except for e, had little or no trouble with single consonants. The top group could identify consonant clusters with more ease than the middle but both could pronounce CVC words more successfully than CVCV (silent e) words. Of vowel combinations not taught in the phonics program both groups pronounced about 8 out of 12 words correctly. (It will be recalled that consonant clusters are not taught either.)

3. Teaching. We prepared new material to compare short and long vowel sounds in word context for the top and middle groups. Then these two groups were given additional lessons in identifying words with post-vocalic 'r' (e.g., her, fur, fir, for) and two adjacent vowels in a one-syllable word (e.g., said, toad, meat, pay, pie). It was decided that an intensive review of the short vowels and consonants be initiated for the low group. An abbreviated form of the Programmed Pre-reading materials was worked out. A carefully structured program of auditory and visual discrimination, as well as work with appropriate trigrams was written frr the group. Writing activities were correlated with each set of lessons. Sentences and short stories were included in the lessons to reinforce mastery of known trigrams. The method used was comparison and contrast. At this point a special phonics group was formed of all low group readers plus one or two from the middle group.

4. Testing in May. Eight children were re-tested on spelling words on which errors had been made. There were 16 errors as opposed to 65 on the first test. Three mistakes were made on short vowel words (19 previously), two errors on long vowel words, (13 previously) and for irregular words, 11 errors (33 previously).

Roswell-Chall: The same procedure was followed as with the spelling Only those subtests where errors had occurred were re-tested. It should be noted that three children were not included in the retest tables. Two children were absent during the two weeks of testing and the other child was not in the class the whole year and was omitted from the

March testing summary. The numbers for each group also reflect the change in the make-up of the three groups. The low group showed a great deal of improvement on the single consonants and vowel sounds both in isolation and in words. Areas which had not been taught directly (silent 'e' rule, consonant blends and vowel combinations) showed much less improvement. The middle group showed general improvement in all areas, especially in knowledge of short and long vowel sounds and consonant blends. However, they did not seem to profit much from the few lessons on vowel combinations and postvocalic 'r.' The top group showed improvement in all areas except consonant blends (which had not been taught). Most errors were made in producing cr-, scr-, str- in isolation. The errors mainly consisted of insertions of vowels before the 'r.' Especially interesting was the great deal of improvement on vowel combinations (which were taught). It may be that the greater number of lessons on vowel combinations that the top group received accounted for the difference between this group and the middle group in improvement on those items. However, it also might be that the middle group would benefit more from a different type of lesson construction.

F. Testing reading comprehension.

1. Silent reading inventory. This informal test was given to the children individually during the last week of March and the second week of April (vacation intervening). Selections were taken from some of the early materials read by all children, and several selections were chosen from each level of a basal reader from Grades 1 to 5. The selections were typed on a primary typewriter.

The child read one selection at a time silently; the reading was timed; he then answered several comprehension questions orally. At the discretion of the examiner, the children were sometimes started on first or second grade material, rather than the pre-primer. The test was terminated when a child could answer only half of the questions; or the time for silent reading was very long; or he was obviously being frustrated by the task.

In scoring, each answer was given one point. The child was credited with points for selections below which he began reading. If, during the silent reading, the child asked how to pronounce a word and that word was later necessary for a correct answer, no credit was given even if the question was answered correctly. Comprehension scores are simply the cumulative correct answers given.

Table VII shows how the individual scores look in terms of the total possible for any grade level. Two students (08%) were reading pre-primer and primer; five (20%) were reading at first grade level; and the rest (72%) were reading anywhere from second to fifth grade level.

Table VII

Scores on Silent Reading Inventory
(March-April)

	pre-pr.	primer	1st	2nd	3rd-early	late	4th	5th
score range	1-6	7-15	16-24	25-33	34-38	39-42	43-47	48-53
f.	1	2	5	5	3	1	5	3
%	.04	.04	.21	.21	.17		.21	.12

Rates of reading were also recorded. What we would expect to happen is that those children whose comprehension scores put them at a higher level would read early selections faster than children whose total score was at a lower level. For instance, someone answering all questions correctly up to and including a fifth grade level would probably read faster than someone who could only read and answer questions correctly at a third grade level.

Table VIII

Rate of Reading in Minutes

Passage read Compre. Level	PP	P	1	2	3^1	3^2	4	5
PP	*3.00							
P	*1.6	*1.9						
1	1.7	3.3	5.3					
2			3.4	8.9	4.6			
3^1		*0.8	1.2	5.7	2.9	2.3	2.2	*3.1
3^2			*1.0	*3.1	1.8	3.6	*3.2	*3.8
4		*0.7	1.5	4.7		2.8	3.6	3.5
5			1.3	3.2		1.7	1.7	2.8

* One child only.

In the main, this did happen, although not with perfect regularity. (This unevenness may be due in part to improperly graded material, uneven procedure in administering the test, or individual styles in reading). But it seems that first graders who can comprehend fifth grade material take no longer to read it than do other first graders to read material appropriate to their lower reading level. Table VIII shows rates of individuals for the several selections at each grade level and the averages.

This informal reading inventory seems to be a useful tool. One or two selections should be replaced by others which would allow us to write better inferential type questions. Procedures for administering the test, e.g., where to start, when to stop, etc. can be specified.

2. Metropliitan Achievement test. On May 17, the Metropolitan Achievement test was administered. There are four subtests: Word-knowledge which consists of a picture and four words, one of which identifies the picture; Word Discrimination -- four words, the teacher says one and the child circles it; Reading sentences -- a picture accompanied by three sentences, one of which identifies it (most of the time anyway) and Reading Stories, which is the regular paragraph followed by several multiple choice questions. The results are shown in Table IX on page 57.

Table IX

Metropolitan Achievement Results: Grade Levels

Test	Group:	I (n=9)	II (n=7)	III (n=4)	IV (n=2)	Mean by Test
Word Knowl.	Range	2.5-3.2^{+}	2.2-2.9	1.8-2.0	1.6-1.7	
	Mean	3.0	2.5	1.9	1.65	2.3
Wrd. Discrim.	Range	2.5-3.6^{+}	2.4-3.6^{+}	1.5-2.3	1.4-1.8	
	Mean	3.1	2.7	2.1	1.6	2.4
Reading	Range	2.5-3.9^{+}	1.8-3.4	1.8-2.0	1.6-1.8	
	Mean	3.4	2.6	1.9	1.7	2.4
Mean by groups		3.2	2.6	2.0	1.65	

The results of this test indicate that most children are reading at Grade Level or above. There may even be a slightly lowering ceiling effect. It seems to indicate that we had grouped the children according to some real ability differences. Two other first grades in the school achieved comparable results. One can interpret this in two ways: a) the current program does no more for children than a basal-reader program, b) given a program completely different from the norm the children achieved as well as those trained in a reading series for which the test was designed. It will be noted that our first graders tested much higher when given an informal silent reading test given earlier in the year than they did on the standardized test, an unusual finding because generally the results are just the opposite. Probably the procedure used in the silent reading inventory allowed for higher grade levels to be reached than is usually the case. Certainly, without the tension engendered by the standardized test, scores do improve.

3. Findings on oral reading errors. (a) General comments. These analyses of errors should be regarded in the light of several assumptions held by the staff.

If, in any given material, several types of information are present, then some of this information actually becomes redundant to the skilled reader. In fact, as one reads, he actually will have a fair notion of what words can and will occur even before he sees them, mainly based on cues from the content of what he has already read. Furthermore, the words that can occur will be further constrained by grammatical structure. And, of course, it is likely that only a portion of any individual word is necessary for it to be identified.

Thus the skilled reader needs to sample only the first few letters in the main words of the unit on which he is focussing in order to make a very good guess about the maaning of the group of words. If this guess is congruent with what he has already read, he proceeds.

Of course, this active "sampling" system will occasionally lead to errors, where the reader's predictions, based on only part of the information actually provided by the printed page, will be wrong. Clearly, all three information sources described in the postulates can contribute to inaccuracies.

Such errors, if semantically logical and syntactically correct, often will not disturb the message. If what the reader reads -- or thinks he is reading-- does not render the passage meaningless or contradictory, he might well never become aware of his error. In fact, it may not be really necessary that he ever correct it.

If, however, his guesses on the basis on this sampling technique are incongruent with respect to what he has previously read, he cannot proceed. When this occurs, the reader has several courses of action available. He can re-read the group of words more carefully. He can backtrack to hunt for an earlier mistake. He can read ahead in hopes of an explanation.

The alternative to this system of sampling and making "educated" guesses is to carefully process every letter on a page, without taking advantage of the semantic and syntactic structure of sentences, paragraphs, and composition. Using this method of reading, the reader is forced to go much more slowly, simply because he must process much more data. He fails to take advantage of the redundancies of language. Furthermore, because he is going slowly, and because he is not focussing so much on the meaning and structure of the passage, he may well end up with a rather poor understanding of what he has read.

We are assuming that the competent reader uses all sources of information available to him, and that failure to use all these sources results in inefficient reading. Furthermore, we are assuming that the competent reader can recognize errors in his reading, can tolerate some error, and has strategies for correcting his errors.

There were two sources of data relevant to these points. The first was the daily observation records of oral reading taken during the reading groups.

(b) Daily oral reading. Samples from three months were compiled to give the number of errors (including no response) per child per observation.

These are given below with the number of observations per group and number of children observed per group. Group IV is omitted from this analysis.

Table X

Number of Errors in Daily Oral Reading

	Observations N			Children N			No.of errors per child per observation			No.of errors 10 wrds per gp		
Group	I	II	III	I	II	III	I	II	III	I	II	III
January	8	5	9	9	7	5	1.17	1.13	3.12	.38	.91	1.23
March	5	3	7	10	7	4	1.56	2.75	3.07	.25	.30	1.17
May	5	8	8	12	7	4*	.58	2.66	5.56	.08	.47	.75

*Rochelle included.

There were fewer observations in March because of the long vacation. The number of errors per pasage read decreases sharply for the top group children in May but increases for the low group. This may be because of increase in amount of material able to be read by the low group. Looking at the number of errors per 10 words seems to indicate that this was so. For, although the low group had an error rate of almost 6 per passage, there was less than one error per 10 running words. A rule of thumb for most teachers when trying out new basal reader materials is to allow for approximately one error per 20 running words when judging instructional level of a child. The middle group seems to stabilize at about three errors per child per passage or about one error per 20 running words, i.e., at their instructional level according to traditional pedagogy. Given a teaching strategy which provides for a certain tolerance for "good" errors while rigidly recording every type of error, the error rate for all groups drops to acceptable levels for even a word-recognition oriented program.

One influence on number of errors was the way in which the errors were corrected. Since no response is considered an error, when a child paused over a word for a period of seconds and this word was supplied by another child we have no way of knowing whether eventually he would have figured it out or not. The table below which categorizes the type of error correction shows how large an area of doubt this really is.

The percentages for each group do not always add up to 100 because a small number of words were uncorrected, or the type of correction not caught. This table is more interesting if read in conjunction with the previous one.

Table XI

Type of Correction, Daily Reading, in %

Type of Correct.	Context, semantic			Phonic			Self-correct			Child tells			Teacher tells		
	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Jan.	4	3	3	4	3	20	9	9	9	55	43	23	24	37	45
March	0	1	2	3	9	20	18	23	13	44	58	31	6	6	21
May	0	1	3	0	5	15	29	9	11	63	65	46	3	17	25

As can be seen, the categories of Teacher tells and Child Tells account for a large part of the correction. For each group, the Teacher Tells category drops from January to May while the Child Tells category increases. One reason for an increase of error rate discussed earlier is that other children may have been supplying a word prematurely. Very early in the school year children began correcting each other during oral reading. (MacKinnon, in How Do Children Learn to Read reported good results from this procedure.) Although the use of a child to correct another has its advantages, it also has its hazards. We did nothing to discourage the procedure, however, and the results show how eager the children were to supply words to each other. The percentage of Self-corrects for the top group increases significantly by May and the only cue (rather than telling) that seems to play a large part is that of Phonics and then only for the Low group.

4. Individual oral reading tests. (a) General comments. In these taping sessions, each child read an "old" passage, drawn from his group's classroom reading, and a "new" passage, which his group was expected to read the next month. Whenever possible, the "new" passages were used as "old" passages in the next months testing. Also, if two different groups covered the same material, the same test passage was used for both groups, although at different points in the term. The test passages were not uniformly given to all groups because the students sometimes had already read the prepared "new" passage by the time of testing and so a different new passage was substituted. Similarly, certain texts were not used for all reading groups and so different old and new passages occurred now and then throughout the year.

The test passages varied somewhat in length and number of sentences. Table XII summarizes these differences for all passages given to more than one group.

Table XII

Numbers of Words and Sentences in Test Passages

	Test Passage A	B	C	D	E	F
No. words	16	19	24	26	26	40
No. sentences	3	3	4	3	2	5

Before examining the main results, it may be useful to see when each group read certain passages, in order to gain some idea of relative progress, and of the sorts of comparisons that are available.

Chart I shows "new Passages" which were read by more than one group. Group IV is not included, few if any points of comparison are available on their reading.

Chart I

Dates when Various Test Passages Cited by Letters were Administered

		Jan. 13	Jan. 27	Feb. 23	Mar. 17	Apr. 15	May 10
Group I		C	D	E	F	-	-
Group II	A	B	C	D	E	F	F
Group III		-	A	B	C	D	
	*	0	10	24	40	57	75

*Number of school days from first test.

Thus it can be seen that Group II read the same material as Group I about one month later, while Group III trailed Group II by about two months.

The following types of information will be considered:

(1) Mean errors by test passage and group. For comparison purposes, this figure has been adjusted to mean errors per 10 words by test passage and group. This index is examined for "new" and "old" passages. "Errors" include any deviation from the written material.

(2) Mean percent of errors self-corrected by passage and group. Variation in this index may be influenced by the fact that the tester supplied corrections more quickly for lower group children than for top group children.

(3) Mean reading time per session by passages and groups. This is a gross index which combines reading time for both "old" and "new" passages in a given session. Since we do not know the relative impact on reading time of old and new passages, we cannot adjust for variations in the lengths of each passage. However, the rate-of-reading data generally confirm the results of the error data.

(b) Findings with regard to errors.

(1) New Passages. As can be seen in Chart II, all groups show a downward trend in mean errors in previously unread materials over the term. These are summarized in Table XIII.

Chart II

Regression Lines for Errors over Time on New Passages

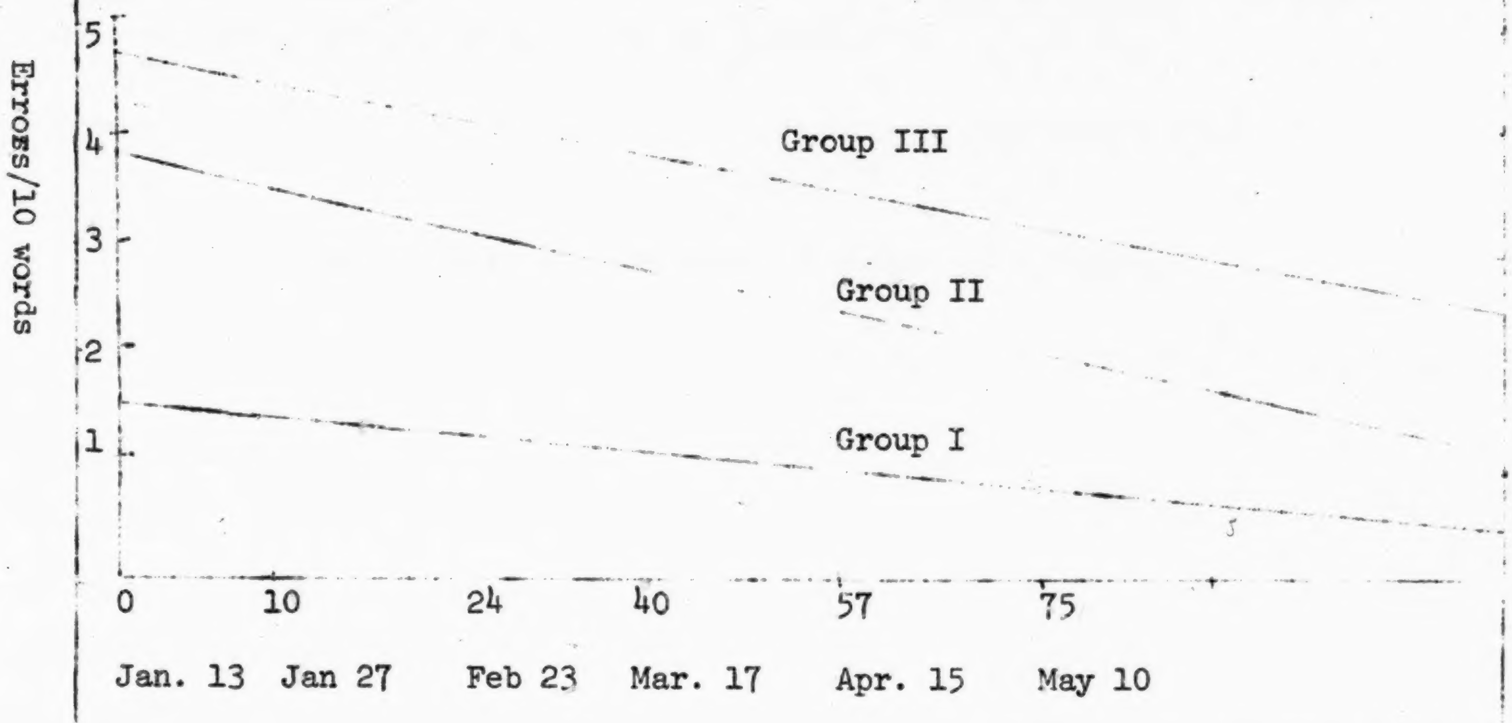


Table XIII

Mean Errors per 10 Words on New Passages

N*	Jan. 13	Jan. 27	Feb. 23	Mar. 17	Apr. 15	May 10
Group I (9)	1.8	1.2	1.3	0.8	0.5	0.6
Group II (6)	3.9	4.0	2.0	2.6	2.1	1.1
Group III(3)	3.8	5.2	3.9	4.2	3.3	2.0

* Three students who moved from one group to another during the term are excluded from this and the following analyses.

(2) By passage. If we pose the question, "When a group reaches the same level of material as a faster group, does the slower group read as accurately?", we find that the top group clearly outdoes the others, while the two slower groups do not seem to differ much.

Table XIV

Mean Errors Per 10 words on Common New Passages

	N	A	B	C	D	E	F
Group I	9			1.2	1.3	0.8	0.5
Group II	6	3.9	4.0	2.0	2.6	2.1	1.1
Group III	3	3.9	4.2	3.3	2.0		

(3) Old passages. Group I started with quite a low level of errors on old passages and declined to an even lower level. Group II did the same except that the final (May) test shows a sharp increase, apparently attributable to the particular passage in question. (Group I also increased in errors the month before on the same passage) In general, both groups seem to have fallen to about 0.2 mean errors per ten words on old passages by the end of the year. Group III also shows a downward trend but ends the year at 1.1 errors/10 words. However, in the two available comparison points, Group III continues to parallel Group II. See Chart III, and summary table XV.

Chart II

Regression Lines for Mean Errors/10 words by Date. Old Passages

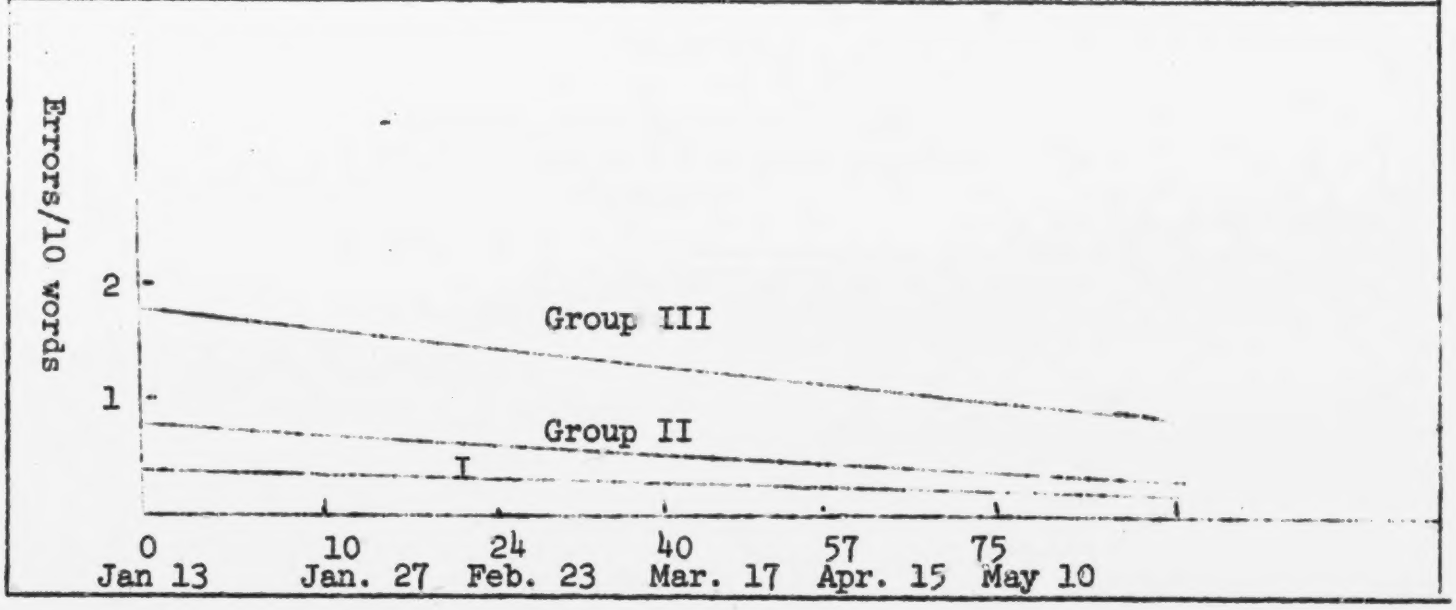


Table XV

Mean Errors/10 words on Old Passages

Group	N	Jan. 13	Jan. 27	Feb. 23	Mar. 17	Apr. 15	May 10
I	9	0.6	0.3	0.2	0.0	0.4	0.2
II	6	1.4	0.8	1.2	0.3	0.2	1.0
III	3	2.0	1.3	2.2	0.0	1.1	1.1

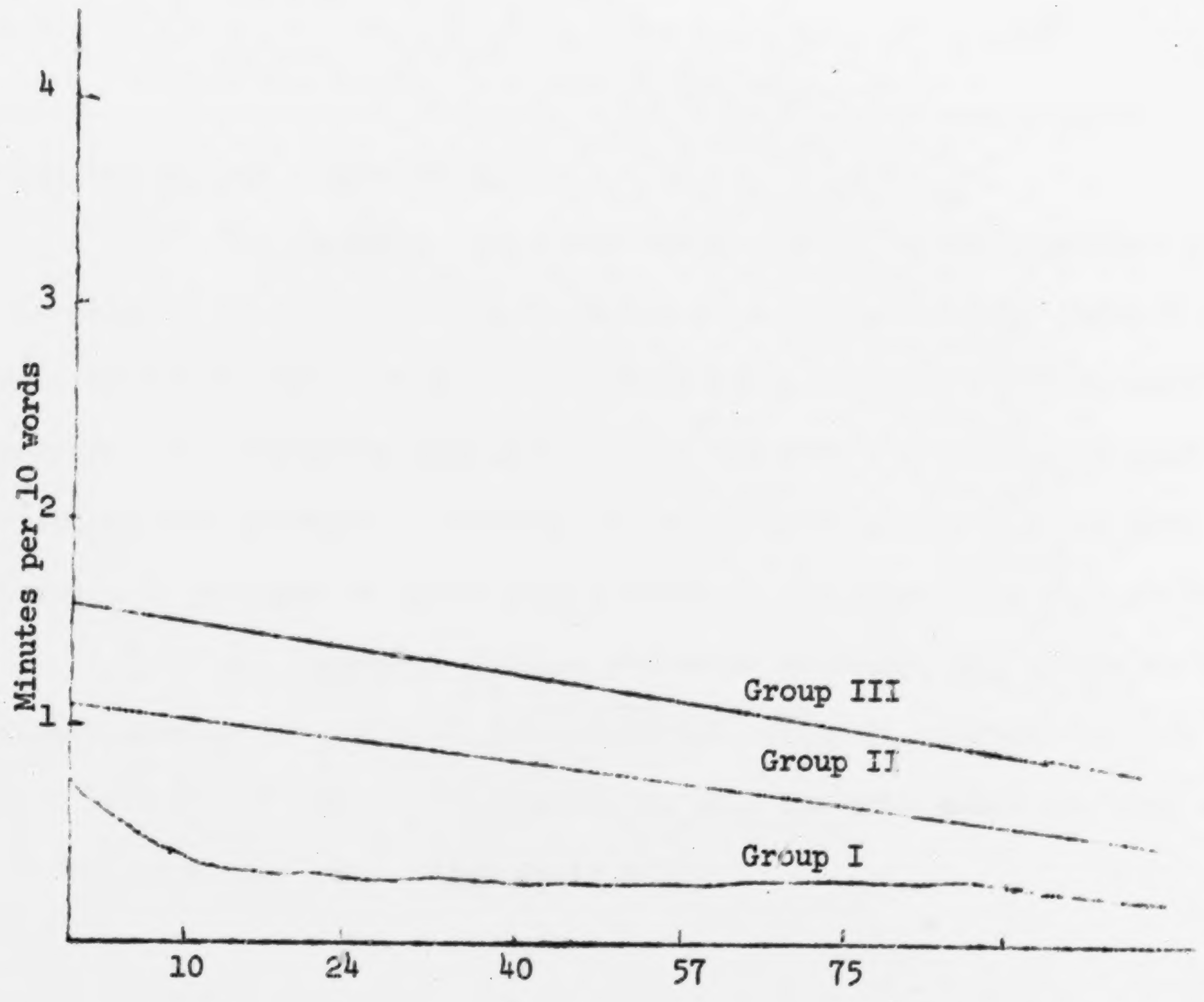
Reading rate (Old and New Passages Combined)

1. Chart III shows clearly the trends over time. Groups II and III parallel each olther closely. (Again, at the two possible comparison points,

their mean rates per 10 words are very similar on the same passages.) Group I declined quickly in mean rate to an apparent floor[2] in March and showed no further change. These results are summarized in Table XVI.

Chart III

Minutes per 10 words by Data
Old and New Passages Com
Combined



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[2] By way of comparison, although our Group I readers seem to have reached a floor at 0.20 minutes for 10 words, two adults read one of the Group I passages at a rate of .04 minutes/10 words -- probably a normal speaking rate for adults given the level of the material.

Table XVI

Mean Rate in January and May

		Mean time in minutes/10 words	
	N	Jan. 13	May 10
Group I	9	0.7	0.2
Group II	6	1.2	0.4
Group III	3	1.4	0.6

Proportion of Self Corrected Errors

1. New Passages. No clear trend appears on new passages, but group means do show differences in amount of self correction. Group I had a mean of 36% errors self corrected, while Group III had 9% errors self corrected. 2. Different passages. There was wide fluctuation of self correction over passages . However, in most cases, groups did not show any agreement in passages on which self correction was especially high or low.

2. Old Passages. During and after February, all errors on old passages made by Group I were self-corrected, Group II started out with a higher rate of self-correction than Group III, but both ended the term at about the same high rate. (See Table XVII)

Table XVII

Percent of Total Errors Self Corrected (Old Passages)

	N	Jan. 13	May 10
Group I	9	33%	100%
Group II	6	52%	80%
Group III	3	23%	77%

Self correction seems to be an ability that develops over time and doesn't seem to have much real relationship with the number of total errors made. The error scores for the three students who were moved from one group to another were compared to see whether these individuals had scores more like the group they left or the group they moved to. The two students who were transferred up to the middle group had a much lower error rate than others in their group before they transferred and after the transfer their error rate was comparable to or less than others in the new group. The one student who moved from the middle to top group received scores before the transfer far lower than most middle group students but after the transfer had an higher error rate than other top students. His error rate on 'new' passages fell somewhere between both groups.

In brief, the data on individual oral reading indicate that Groups II and III have more in common with each other than with Group I. Although Group III trailed Group II by two months, its members generally made about the same number of errors on the same passages. This was especially true of the 'new' passages. Very few opportunities for comparison existed among the 'old' passages. Similar results obtained for rate of reading although Group II shows a slight edge over Group III. However, when the percentage of self corrections is examined, Group III is seen to differ somewhat from Group II.

5. Comparison of daily and monthly oral reading. The three children who were removed from the monthly findings were included in their groups for daily reading. (1) On passages that are 'old' in the taped sessions, that are read previously in a group, vs. a first presentation in the reading group the percent of error varies depending on the group.

Comparison of Errors in May	Taped 'New"	Taped "old"	Daily Reading Group
Group I	0.6	0.2	.08
Group II	1.1	1.0	.47
Group III	2.0	1.1	.75

Reading groups errors are lower than either old or new passages, whereas one would have expected them to be somewhere in between.

(2) Comparison of self correction for both reading situations reveals that, in many cases, percent of self correction plus child tells for the reading group equals amount of percent of self correction alone in the taped reading. This suggests that children would correct themselves if other children did not. For May the figures are presented on page 72.

Comparison of Correction
In May

	Taped	Reading Group	
	Self-Correction	Self correction	Child Tells
Group I	100%	29%	63%
Group II	80%	9%	65%
Group III	77%	11%	46%

G. Summary.

In trying to implement a reading program concerned with a total literate environment, we deliberately chose materials and activities that would combine handwriting, phonics, listening and reading as much as possible. Although the procedures and materials have sometimes been separated in the text, it should be kept in mind that rarely were they separate in paactice.

Most of what we have said has been descriptive. Little rigorous (and sometimes rigid) control and measurement occurred. At each step we were tentative and relied primarily on close observation and detailed recording of the childrens' reactions to the program.

The testing that occurred at various points in the year was meant to be diagnostic. It helped us plan the next step in the program.

1. Reading. Reading materials were chosen from many sources. We used children's own stories, teacher's sentences, trade books, text books, messages from one child to another, bulletin board titles, worksheets, riddles,

crossword puzzles, and stories composed by our staff. We did this because we felt that a literate person reads every thing from bill boards to Proust and automatic responses to the printed word as communication should be built up. Our second reason was to allow a variety of cues to be present in the reading matter. If a narrow range of reading matter was presented, words pre-taught, length and structure controlled, we felt the child would not be allowed the full range of sampling necessary to be a reader in any real sense during his first year of instruction.

2. Phonics. A letter phonics program was taught stressing individual correspondences for the more stable consonants and a comparison and contrast approach for short and long vowels. Two subroutines evolved: one an intensive structured review for slow moving readers, the other, additional vowel patterns for the faster moving readers. The phonics program has been closely tied to the reading program through-out, although its use as a major cueing device in oral reading was confined to the low group. Testing has indicated that a straight forward phonics program which stresses simple frequent correspondences is enough for many children to allow them to continue on their own. Many of the first graders tested well in areas in which there had been no phonic instruction at all.

3. Literate environment. The message board, the tape recorder, the electric typewriter, all contributed to our attempts to create a literate environment. But these are things, inanimate, and by themselves mean nothing. The program we have outlined for their use has been creative we feel, but still a first approximation. It is also true that to have a literate environment there must be no sharp demarcation among the activities. Each contributes. At any time during the two hour reading period there might

be a child at the type writer, five or six listening to a taped story, six or eight working with the teacher, one or two looking for a book to read, another checking an SRA lesson with the observer, and several at their seats comparing answers with each other on a worksheet. It is the whole atmosphere that counts.

4. Results. All children learned to read. Those who didn't learn quickly were reading comfortably at a first grade level at the year's end. They were not frustrated at their own reading level and stand to make regular progress if given structure in lessons and frequent review. Most of the children read above grade level and we expect that their progress will accelerate during the coming year.

Some facets of the program which we condidered positive are hard to describe quantitatively. The children's attitude toward the reading task, their ability to use a variety of cues to attack new words, the beginnings of a critical attitude toward what they read are all hard to measure quantitatively. As some indication of preference, for several weeks we kept track of the number of students who voluntarily chose to read library books in their free time. During one week, the top group (13 students) averaged seven books, with a range of 13 to 2. The middle group plus Rochelle (5 students) averaged 3 books, with a range of 9 to 2. During the following week 11 students out of the 24 chose to read on the average five books. None of the basal reader books were chosen.

The teacher has commented that the students began reading trade books this year much earlier than heretofore, and that this year's students don't regard reading as a 'subject', something you only do at a specified time in one corner of the room with the teacher. Parents have commented that their children will attempt to read sections of the newspaper, labels, etc. and those parents with older children say that this willingness to read or attempt to read didn't occur at this stage for their other chiddren.

A substitute teacher requested afternoon reading session because she was impressed by the children's ability to attack new words and their smooth oral reading. Finally, the other first grade teachers in the school began using some of the ideas and materials we had provided. All of these comments are not proof of a sucesssful reading method but certainly provide encouraging anecdotal data and give an indication of the reception that the program has had in the community.

H. Future plans of the Project.

Next year Project Literacy will be working with two first grade classrooms. We will continue in the same school with a heterogeneous group and add a rural classroom of students who have tested as "least ready" to read.

I. Recommendations.

Projects begun this year which we would like to include in next year's curriculum in some form are:

1. Use of student composed stories as an introduction to reading.
2. Use of teacher composed sentences as a beginning reading device.
3. Testing for pre-reading skills.
4. Use of trade books and read-along-with-me stories; use of fairy tales and folk tales.
5. Listening to taped stories.
6. Individual time at the electric typewriter.
7. Message board for a month or two.
8. Cross word puzzles, riddles, games, anagrams.

9. Phrases and word cards to increase sentence sense; "goofy" sentences.
10. Coding Unit in Pre-Reading stage.

IV. Questions for Discussion

Pre-reading

1. Discussion of Coding Unit (to be presented separately). Modifications in this unit. Possibllity of pre-reading skills in Kindergarten.

2. Specification of which skills must precede reading and which may be taught simultaneously with the first reading phase. Some decision on inductive vs. deductive procedures for teaching the necessary skills.

Phonics

1. Specific ways of integrating handwriting and phonics with each other and with the main reading program. Sequence of letters taught can parallel phonics program or be chosen on some internal criteria. Some published handwriting systems have more merit than others in terms of consistency and simplicity in formation of letters. Should individual letters be taught or always put into word or sentence context. Possible use of models or overhead projector to teach letter formation. Use of phonics skills to reinforce handwriting skills. Should any formal spelling be taught?

2. If the letter phonics program is continued, should some work in blending individual sounds into words precede or be part of initial training. Some consideration of use of the syllable as an appropriate phonic unit may also necessitate lessons on blending. What is the appropriate sequence of presentation.

3. We had planned to integrate phonics teaching as much as possible into the actual reading. This means that special materials must be built or that the teacher stop a reading lesson, thereby interrupting continuity or comprehension to point out phonically relevant facts. In practice the phonics was given a separate part in the program with five to 10 minute practice during the group instruction. Given this practice it was possible to integrate the phonic knowledge with other reading strategies. It is particularly difficult to integrate a synthetic phonics program into a comprehension oriented reading atmosphere, at least at the stage when children are learning consonants. One of the goals of the phonics program was to see how far a little phonics could carry a beginning reader. For over half the class the answer seems to be: a long way. The children began to induce regularities on their own once given a small bunch of keys. Some quite incidental comments were acted upon with regularity. For other children this did not happen. The slower readers improved with very structured phonics lessons, much review over the same concept and specific written practice. Two phonics programs may be necessary, or one with branching.

Initial Reading

1. Should there be more control over children's "experience" stories? Could they be more similar to teacher-composed sentences this year?

2. Should teacher composed sentences be pre-structured to allow for controlled permutations and to give examples suitable for beginning phonics work? Should written review accompany these sentences? Worksheets, etc?

Texts

1. More material is needed at the initial reading stage. At this stage vocabulary should be controlled and repetition is almost mandatory. What should be the parameters of control if we are to write our own stories?

2. What kinds of control imposed re length of line, type, pictures, etc.

3. Which additional texts and what sort of content would be appropriate?

Reading Errors.

How much latitude should be allowed? This year errors were not allowed to pass but we were not concerned by a jump now and then in error rate. This was because some of the material being read was at a high difficulty level. Some of it was programmed as a read-along-with-me. The child in these cases tried a word but if he had trouble it was supplied. Is this a good procedure?

Slow readers in trying to pronounce a hard word would often give a close approximation. When asked to try again the result was further away from the stimulus than their first attempt. For how long do you let a child fumble? Anything distracts a slow learning child. One error seems to start a whole chain and continuity, attention and comprehension are lost. The problem of attending seems to be the one thing the slow child doesn't have that the faster learners do. Methods of correcting errors for them should be quick but not distracting. In this regard, how much autonomy should be allowed other chidren in the group as to correction of a reading error?

Oral vs. Silent Reading

Our children read orally or semi-orally most of the year even when asked to read silently. It wasn't until late Spring when top group children were observed (in oral reading taping sessions) to scan a line before reading it aloud. Most of the children still have some audible sub-vocalization during silent reading. This is something we didn't worry about. Should we?

Language Structure.

What other ways exist to manipulate sentence structure? How can we make better use of techniques so far devised (i.e., phrase manipulation, "goofy" sentences, open ended sentences)?

Worksheets

These were uneven in quality this year, mainly because of time limitations. Suggestions for the kind of written review to accompany texts would be profitable.

Decoding Cues

There should be continued work in specifying a variety of cues for decoding. This needs more specific programming so that children can consciously try different strategies.

Questioning Techniques.

Teacher questions are probably very important. Kind of questions and timing. For example, do you ask a question about a passage before it is read or after? Do you let the child try to say the word and then call his attention to some aspect he missed or ask him first?

Intonation Patterns.

Better readers read more smoothly, their intonation pattern is less choppy than poor readers. Should the teacher work directly on better intonation with poor readers? Should the teacher consider it a symptom to disappear when other deficiencies are removed?

Relating Reading to Other Subjects.

Since the literate environment idea served to expand activities beyond the regular reading period what further possibilities are there for expanding and integrating the language arts program into other subject areas so that these can become mutually reinforcing?

Teacher Aids.

This is perhaps pre-mature but some thought must eventually be given to ways of standardizing the observer's activities so that the class could operate with only one teacher.

Evaluation.

How do you evaluate an attitude toward reading, or a preference for reading? We should review and strengthen diagnostic and evaluation procedures.

Use of Technology.

How can the typewriter be used best for pre-reading and early reading? We still need imaginative motivational devices for original work. Tape recorder: we'd like judgments on relative usefulness of procedures tried this year. Suggestions for other procedures. (e.g., console system of two typewriters, printing set) Films - filmstrips - overhead projector were not used this year. There should be continued investigation into usefulness of technology.

APPENDICES

Appendix 1: Group Stories

Appendix 2: Teacher Sentences

Appendix 3: The Phonics Program

    Guidelines and Recommendations
    Rationale (1965 Summer Seminar)
    Rationale and Sequence (September, 1965)

Appendix 4: "Little Tiger" Lesson Plan

Appendix 5: Vocabulary Lists

Appendix 6: Goofy Sentences

Appendix 7: Test Data

    Auditory and Visual Discrimination Test
    Spelling Test
    Roswell-Chall Test
    Silent Reading Test
    Summary List

Appendix 8: Texts and Trade Books

Appendix 9: Observation Sheet

Appendix 1

Group Stories

1. Fowler's Toads

We have two toads.
We fed the toads.
We fed our toads flies and worms.

2. The Monarch Butterfly

The Monarch butterfly came from the South.
The Monarch butterfly laid 300 eggs.
The baby caterpillar came out of the egg.
After it grew, it was orange, black and white.
The caterpillar climbed up on a log.
She shed her skin. She hitched her hind legs up to a log.
Now she is a chrysalis.

3.

One day I went out into the snow and had a wonderful time. I took my puppy with me. I got my sled and started down the hill when suddenly my puppy jumped on to the sled. We went bumpety bump down the hill. At the bottom of the hill we both fell off because in front of us was a tree. Then we went home and had cookies and cocoa.

4. Science

We boiled purple cabbage and the water turned dark blue. We put vinegar into some of the water and it turned pink.
We put some baking soda solution into some of the blue water and it turned light green.
This is a chemical reaction.

5. Mold Gardens

On December 9, we started our mold gardens. On December 14, we opened the jars and saw green mold on the orange. It was as big as a pin head. There was white mold on the cheese, bread, lemon, cereal, roll and cookie. It looked fuzzy like cotton and it smelled bad.

Appendix 2

Teacher Sentences (Those used only once or twice not included)

My name is Mrs. Cushman.
My name is ________ (Tom, Dick, etc.)
________ is my name.

This is red.	Is this red?	Yes
These are red.	Is it red?	No

(blue, purple, green, yellow, brown, orange)

This is a toad.
What is this?
What is it?

2 and 1 is 3.

Billy has a ball and bat.

The weather today is ________.
(cloudy, sunny, rainy, windy)

Our weather is (cloudy) today.
Today the weather is (cloudy).
This is cloudy.

We fed the toads.
We fed two toads.

Today is Monday. (Tuesday, etc.)
This is Monday.
This is September.

Rhyming

Hickory, Dickory Dock

Humpty Dumpty

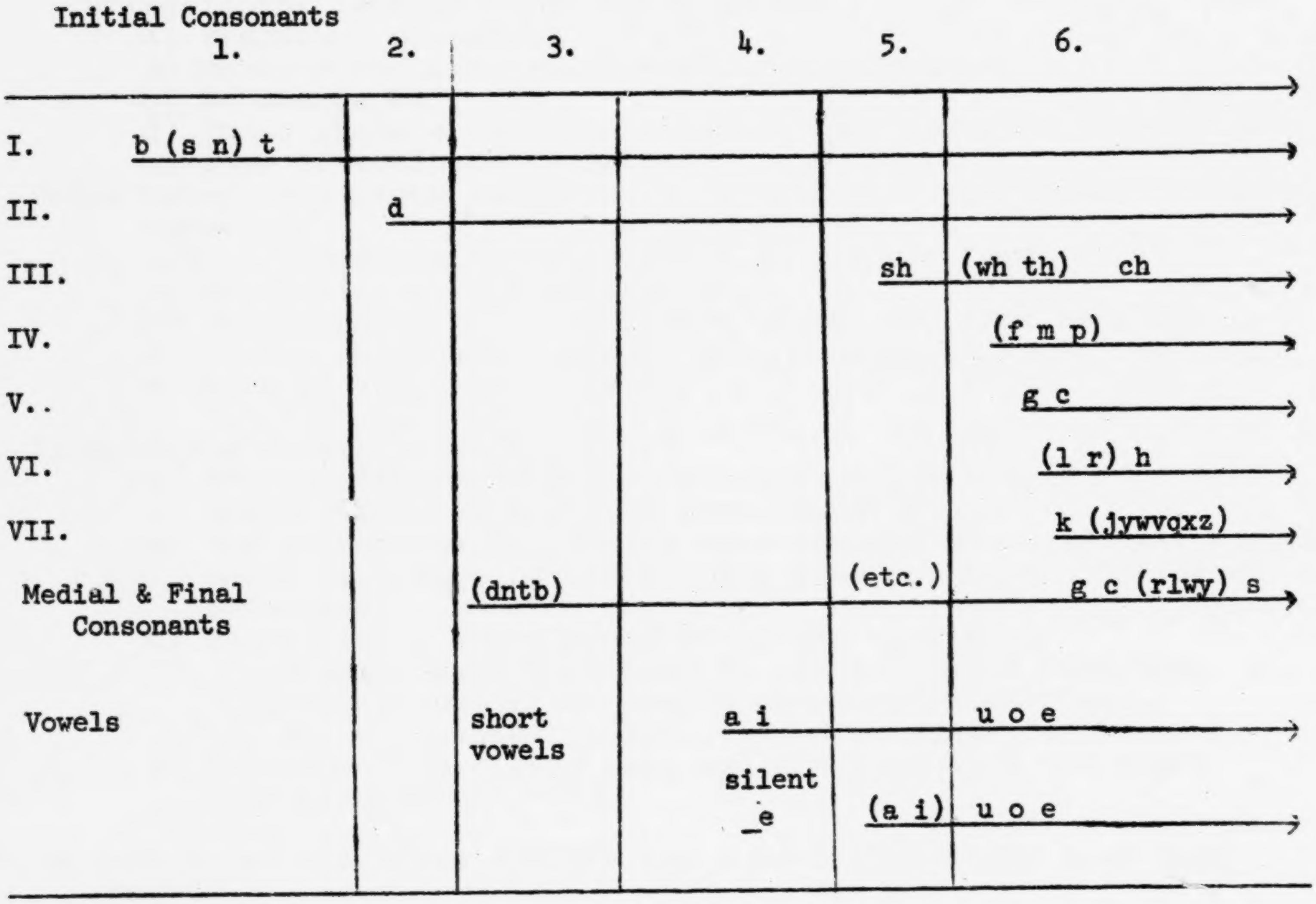
Little Miss Muffet

One Fish, Two Fish (trade book)

Appendix 3

Time dimension from left to right
Brackets = order not important
Vertical line = stages in program

Chart of Phonics Program



Initial Consonants	1.	2.	3.	4.	5.	6.
I.	b (s n) t					
II.		d				
III.					sh	(wh th) ch
IV.						(f m p)
V..						g c
VI.						(l r) h
VII.						k (jywvqxz)
Medial & Final Consonants			(dntb)		(etc.)	g c (rlwy) s
Vowels			short vowels	a i		u o e
				silent _e	(a i)	u o e

Initial Consonants

Line I
- Maximally graphic auditory contrast
- No digraphs
- Sound correspondence faily regular regardless of environment
- Sound easily isolated auditorily and produced
- Frequent letters

Line II
- Minimal graphic contrast

Line III
- Digraphs

Line IV
- Given prior letters, minimum auditory contrast

Line V
- Sound of letter contingent on environment

Line VI
- Not easily isolated or produced

Line VII
- Infrequent letters

SPELLING-TO-SOUND RELATIONSHIP *

Start of reading program- Phase II (The prereading group will have started, by having taught the alphabetic code.)

I. Teaching Initial Consonants **
  Criteria for letters which we'll select
    a) Frequency of usage
    b) Maximum contrast sound and graphic form
    c) No diagraphs
    d) Those whose sounds don't depend upon contingent relationships
    e) Ease of auditory isolation.

Note: Later consonants taught in a reduction of the above; as below.
  Reduction:
    a)Goes towards minimal contrast on graphic form
    b) Production can be easily heard
    c) Introduction of -h- digraphs th,sh, ch, (not same day)
    d) Sounds which don't depend upon contingent relationships.
    e) Ease of auditory isolation

II Syllable Regularities ($V\bar{\ }C$)
  a) Avoid following final consonants: n,g,r,l,w,.
  b) Use consonantswhich have same sound at end.
  c) Use consonants which have been introduced as initial consonants. eg. teach by contrasting same vowel with different consonants.
  d) Teach single short sound of single vowels
    1.choose vowel accirding to maximum sound contrast.
    2.minimal number of sounds connected with vowel.
      eg. 2 vowelsdifferent- same consonant- cup, cap.
  e) Introduce the silent -e-, and contrast with the short vowel sounds

** Evaluation will take place after 4 or 5 consonants have been taught:
  a) coding concept - (spelling-to-sound)
  b) Throughout to observe if the children have the specific relationships.

*Sentence Group
July 1, 1965

Letter names	Names of Sounds in Terms of Letter Names	Names of Sounds in Terms of Sounds [Phonetic symbols]	
c[1]	k sound	k	cat
	s sound	s	city
d	d sound	d	dot
e	short e sound	ɛ	bet
	long e sound	i	beat
f	f sound	f	feet
g	g sound	g	got
	j sound	ǰ	gem
h	h sound	h	hat
i	short i sound	ɪ	hit
	long i sound	aɪ	kite
j	j sound	ǰ	jet
k	k sound	k	kit
l	l sound	l	lit
m	m sound	m	mat
n	n sound	n	nap
o	short o sound[2]	a, ɔ	hot, loss
	long o sound	o	home
p	p sound	p	pot
q [with u]	q-u sound =kw	kw	quit
r	r sound	r	rat
s	s sound	s	sat
t	t sound	t	top

Letter names	Names of Sounds in Terms of Letter Names	Names of Sounds in Terms of Sounds [Phonetic symbols]	
u	short u	ə	cut
	long u	yu	cute
v	v sound	v	voice
w	w sound	w	wet
x	x sound = ks	ks	six
y	y sound	y	yet
		i	happy
z	z sound	z	zoo
ch	c-h sound	č	chat
sh	s-h sound	š	shot
wh	w-h sound	ʍ	when
th	t-h sound [voiceless][3]	θ	thin
th	t-h sound [voiced]	ð	that

Sounds not consistently labeled with names of letters:

ž as in pleasure

u as in blue

ʊ as in put

aʊ as in how

oi as in boy

[1] c corresponds to sounds which also correspond to s and k; therefore " c sound" is not necessary.

[2] short o refers to two sounds. We probably could use a separate label.

[3] the difference between θ and ð need hardly be pointed out. Teaching should be centered on θ in thin, thank. ð occurs initially in function words only.

Phonics Program

Concepts, Sequence of Letters	Rationale
I. Letters regularly correspond to speech sounds. Initial b,s,n,t (prevocalic)	Initial position - simplicity. Prevocalic (rather than consonant clusters) - consonant is more easily isolated. Frequent letters, correspondences are regular, Maximal graphic contrast with each other. Contrast in manner of articulation; 2 voiced, 2 voiceless (That 3 are alveolar- overridden by considerations of manner, frequency, graphic contrast) Production of b - visible.
II. Some letters look almost alike. Initial d	Early introduction of minimally contrastive characteristics, in this case visual form. Introduce frequent letter, with regular correspondences. Suitable for shifting focus of word from intial to other positions.
III. Correspondences are more or less regular in spite of position in words. Final and Medial b, n,t,d	No new letters are introduced at this phase, since previous letters are both frequent and regular in these other positions (except s which is postponed.) Note: That there are not many examples of single occurrenes of these letters between vowels (i.e. lady, city)
IV. Vowels are phonetically and distributionally different from consonants (only vowels can fit in the frame b_t.) a, i, (as in bat, bit)	Of the "short" vowels, these two have maximal phonetic and graphic contrast. These vowels are combinable with b,s,n,t,d. Vowels are introduced here so that students have an opportunity to decode whole words early in the program.

V. A letter may stand for more than one sound, but there may be another letter in the word that signals the appropriate sound. (i.e., a letter may serve to only mark - even at a distance- another letter. a, i - e (date, bite)	Early introduction of (1)diverse correspondences and (2) markers. The notion of diversity might make more sense when accompanied by the notion that there are contingencies that determine which of various sounds should be encoded. Intoduction of a frequent spelling pattern, even with letters already presented.
VI. A combination of two letters may correspond to one sound. sh ,th (thing)	Even though h has not been introduced as an independent letter, here it is introduced with the familiar s and t as a marker. However, unlike the VCe pattern of V., we assume it is more useful to teach these as units. Note: that th, as in that probably does not have to be taught, because it occurs primarily in function words which are to be presented whole in sentences.
Expand Concepts I, III. m, p, h Note: h is not presented in final position.	Several more frequent and regular consonants are presented to demonstrate that new correspondences can be learned in the same way as earlier ones.
Expand Concept IV. u, o (but, pot)	More short vowels. Familiar concept is reinforced with new examples.
Expand Concept V. u, o - e (cute, dune, home)	Contrast long vowel sound with short vowels. Vowels are taught to expand the possibility of decoding whole words.
VII. Some letters have different correspondences according to their positions in words. e (pet) -e (hate) (possibly Pete)	e (except as a marker) has been postponed as a short vowel so as to teach the marking function in and of itself. However, since short e is common, it is introduced at this stage, but in contrast to -e as a marker. Note: There are few examples in the language of -eCe.

Expand Concept VI. ch, wh (No dialect fuss, re: wh; it's either [w] or [ʍ].	An opportunity for expansion of a known concept. Note that c and w have not been presented alone. Therefore, unity with h is to be emphasized. wh is in few words, but these words are common.
VIII. Some sounds are represented by one letter in some postions and by that letter and another letter in other positions. s__ f__ k__ __ss __ff __ck	Familiar letter s__ presented previously only initially. Present here to demonstrate postional variation. New letter f is common and regular. Note that __ck is common. C has not been presented individually yet; therefore ck can be shown to be a variation of k in this position.
Expand concept VII. y__ _Cy yet, baby	Vocalic and consonantal y contrasted. More common is the final y. Note: It is expected that a short amount of time will be spent here, since many more examples occur in the next section.
Expand Connepts VII and VIII. happy poppy	Introducing a very common pattern, especially for children. Opportunity to review all consonants already learned. e.g. tubby daddy Ricky fussy tummy batty happy bunny puffy
Expand Concept I r, l, j	r and l are common, but often somewhat difficult to produce for six year olds. j is easy to produce and common in names. j does not occur finally.

	Note: r and l in postvocalic position not in first part of this program, since these vowel sounds differ in quality from those preceding most other consonant sounds. Compare: male, and mare, with mate. These spelling patterns are also difficult: bird, burn, fern. This point may not have to be taught explicity, since encoding of pre-r vowels may be automatic, expecially given other strategies for decoding.
Expand Concept V _ng	Common combination. Limit to final position or verb stem + ing ending.
Expand Concept VII qu	New letter q always accompanied by u. u is consonantal when marked by q (but q has its own correspondences. Contrast with u in duck.
Expand Concept V g, c	(Note that c has been presented in ch, ck) Reiteration of notion of contingency - but note that marking element has its own sound correspondence, too. ge ga ce ca (c as s - not very useful in first grade. g-rules are not as regular as c- rules.)
Expand Concept I, III, etc. w v z z (_zz) w (consonantal only) v (never written finally if final sound, followed by _e)	This set almost completes presentation of the alphabet. Note the restrictions.

(Special Concept IX?)

Letter x stands for two sounds.

This completes the alphabet.

NOTE: We have not included the following in the program:

1) Morphological endings
2) Consonant clusters
3) Vowel digraphs
4) Postvocalic l and r

Appendix 3

Guidelines and Recommendations for Phonics Program:

Procedures for Referring to Sounds and Letters:

Learning sound-symbol correspondences involves two major process:

decoding print to speech - "What sound does this [these] letter [s] stand for?"
"How do you read this [these] letters?"

and coding speech to print - "What letter stands for this sound?"
"How do you write this sound?"

In teaching phonics, the teacher refers to names of letters and to names of sounds. There are two labels for names of sounds listed in the following chart: one in terms of letter names, and one in terms of the sounds themselves.

It is recommended that the teacher use the sounds themselves rather than the sound in terms of the letter names when it is necessary to focus the children's attention on a particular sound. [e. g. Find the words that have the sound [æ] as in the middle of bat.] The children should be able to produce the sound if it helps them to know what to listen for. Because some isolated sounds do not carry well and may have a different quality in various word and sentence environments, the teacher should follow the isolated sound with an example of the sound in context of a word. [e.g. the [θ] as in thin.]

Letter names	Names of Sounds in Terms of Letter Names	Names of Sounds in Terms of Sounds [Phonetic symbols]	
a	short a sound	æ	bat
	long a sound	e	bait
b	b sound	b	bet

Little Tiger Learns His ABC Suggestions for Teaching

Prior: Story is taped. Ss listen at least once and listen again at will.

Lesson 1

a) Teacher introduces to group the story. Ss look at their own book while the teacher reads. Teacher watches to see that eyes are moving across the page as Ss follow along; also that Ss turn the page at the proper time.

b) Teacher goes back to beginning of the book. She reads the top line; calls on individual Ss to read "And that was A" etc.

Written work: Ss given a sheet with the following lower and capital letters to match, b, c, i, k, o, s, t, u, v, w, x, z, (j, p, y) The last three letters go below the line in the lower case but not in the upper; therefore must be clearly printed.

Lesson 2

Teacher reads each page and asks what word in the sentence starts with the letter A (B, C, etc.) which is on each page. The teacher points out the relation between lower case and capital letters in each case. Then she asks a volunteer to read that page.

Written work: Ss underline word that begins like the letter in the box.
e.g., C He cruised on a crocodile.
I He insisted on ice cream.
Use about eight letters from the matching set in lesson 1, also.
Ss can draw a picture of He slept in his socks. They can find that sentence in their book to help. Ss should be encouraged to write the sentence on their drawing if they think they can.

Lesson 3

Continue yesterday's lesson if it didn't get finished, or do a review. Then, the teacher asks who can read the first page, or if she herself should read it. If no one can read it, the teacher reads the page. She then calls on one S to read the same page. Otherwise, The students read whatever page they can without help. They can skip around in the book. Alphabet cards may be used to help other students to find the place.

Written work: Matching "hard" letters, lower and upper case: a, d, e, f, g, h, m, n, q, r. Tell the students to look at the wall chart of the alphabet or their Little Tiger book to help. The students can draw a picture of He napped at noon. and write the sentence underneath if they think they can.

Lesson 4

Teacher points out past tense endings, -ed on most of the verbs. She makes two columns on the board and writes words that the students give her. The second column is to contain irregular verbs. Elicit from the students that two of the regular (booed, mooed) and two of the irregular (grew, drew) rhyme. Point out briefly the difference between insisted / d/, escaped /t/ and yelled /d/, but don't belabor the points. Most of the words end with the same sound as in yelled (learned, booed, cruised, jigged, mooed, opened, played, teased, vacationed, wintered, x-rayed, yelled, zoomed).

insisted -- quilted
escaped -- hopped, kissed, laughed, napped

The irregular verbs are ate, drew, fought, grew, ran, slept, upset.

Written work: Same as Lesson 2 only other letters; about 8 or 9 sentenses. Students can draw a picture of He teased a tortoise. and write the sentence if possible.

Lesson 5

Teacher reads the sentence in the book. Points to 'he' says to whom does it refer? Asks students to find 'he' again. Asks "to whom does it refer?" The teacher goes through pages identifying picture and finind the word (noun) that stands for the picture. The teacher asks for phrases, occasionally, e.g., an apple, at the bear (Note: but NOT on ice cream) The teacher writes on the board: Here is ______. using one of the nouns. The students find it in their book and read the sentence.

Written work: Same as lesson 2. Finish the letters and sentences. The students can draw a picture of He drew a dinosaur.

Lesson 6

The teacher writes the sentence on the board. The students find the same sentence in the book and read. The teacher skips around in the book choosing sentences. The students then close their books and read the sentences.

Written work: Cut and paste type lesson. Incomplete sentence with list of possible words in column to the right. The letter the missing word begins with is to the left of the sentence:

A	He ate an _____.	kiwi
K	He kissed a ______.	socks
N	He napped at ______.	yak
Q	He quilted a ______.	apple
S	He slept in his _____.	noon
Y	He yelled at a ______.	quilt

Lesson 7

Continue with the type of activity outlined in lesson 6.

Lesson 8

Individual students read first line; unison reading of the second line. Teacher works for natural unlabored reading. Group is (hopefully) motivated to re-read this last time to prepare to read to the whole class as a sort of choral reading exercise.

Appendix 5

Vocabulary

Noun	Verb	Adjective	Adverb	Pronoun	Function
Ladybird (16 words)					
ball dog shop tree Peter Jane	likes is has			I	and the a here
Teacher Composed (45 words)					
weather name today bat cat snow temperature clouds wind fog rain none	are	many tall short thin fat sunny cloudy rainy snowy yellow red symmetrical three four five one two purple brown my orange blue	partly mostly	our we these what this	how yes no
My Pet (30 words)					
pet something lot cars	have play do know can eat run(s) jump(s) stop get	little	now too after	you it him me he who	but to with up on for
The House Where Nobody Lived (30 words)					
house windows doors paint home hen woman	live(d) had went saw want(ed) sat put painted were didn't	old happy	just	she they nobody	by at in around where there

Appendix 6

Directions for "goofy" sentences.

1. "I'm going to see how sharp you are. Watch what I write." Writes a sentence on board. "Read it silently. Raise your hand if you can read it." Call on one child to read. Make sure others are watching. Major aim is not phonics so call on someone who thinks they can read it.

2. Ask whole group: "Does that sound alright to you? Does it make sense? Would you say it this way?" or something similar.
Accept several different answers if they are sensible.

3. "How can we change it so that it will be something we could say?" With syntactic errors always ask this question; with semantic don't press it if the children don't come up with something right away. Show them one way of changing the sentence if you want to. Then ask: "Now, does it sound O.K.?"

*For use mainly with slow readers

Semantic Errors

Ladybird Words

The tree likes the dog.
A toy has a tree.
Peter is a toy.
The ball likes the toy.
The tree is the ball.
Here is a ball the toy likes.
Jane is the tree.

Ladybird + Teacher composed Words

My name is tall and fat.
The cat has a fat, thin bat.
The tree is partly short.
One bat is cloudy and rainy.
Our weather today is mostly
    red and partly yellow.
This purple cat is mostly yellow.
Four clouds are five.
Today is symmetrical and brown.

Syntactic Errors

Ladybird Words

Peter and Jane likes the dog.
The ball and the dog is here.
Peter and Jane is here.
Peter and Jane has a ball.
The Jane has a dog.
I likes a toy shop.
I has a ball.
I is here.
The dog has a here.
Here has Peter.

Ladybird + Teacher composed Words

The weather are rainy.
Two clouds is purple.
How are the weather today?
This yellow cat are here.
Many rain is partly snow.
These cloud is red and fat.
How many is these?

Appendix 6

Goofy Sentences

Semantic Errors

I like to eat funny rhymes.
The bee jumped up on him.
The kitten rode his boat to the top of the hill.
The bee ran after the fox.
The boat looks to see what the house was doing.
The rabbit jumped up to the top of the tree.
A tree is something red and white.
Rabbits are green and trees are white.
I went down the hill to get to the top.
Peter was so happy he began to cry.
We made a fire because it was a hot day.
A hen is bigger than all the animals.
The little boy is older than his mother.

Syntactic Errors

What happened to make the fox ran away?
Why did he went down the hill?
Why is you looking at me like that?
Something good are what I like.
Where can we go if we doesn't want a ride?
He turn the page to know why it happened.
That why I like you.
That one not good, but this one is.
Little rabbit eat good, green grass.
You is doing something good.
It was a big boat for I to ride.
Me mother likes to make something good to eat.
I are looking at something little.
Why do the rain go down the window?
He have something funny in his cap.

Appendix 6

Goofy Sentences

*For use with other readers.

Semantic Errors

My Pet Words

Little cars eat mostly clouds.
A pet is to stop cars with.
Something to eat is snowy and rainy.
Many cars have to run and jump.
My little pet is mostly cloudy.
A little something is a lot.
A lot of clouds can eat something.
Red cars can get up on the wind.
Clouds know how to stop the wind.
Cars know how to play with my pet.

House Where Nobody Lived Words

Nobody and nobody went to the house.
The little house just sat and looked at the cat.
Rain runs up the window.
The cars run after the angle.
The tree jumps up on the cat.
The shop has a sunny, cloudy window.
Many cars are tall, thin and cloudy.

Syntactic Errors

My Pet Words

Do you know who I have to eat?
He get up on me to play.
We jumps and runs.
He have something to eat now.
Too many pets runs after cars.
A ball is oomething what we play with.
Do you know who I is?
We likes to play with our pet.

House Where Nobody Lived Words

The hen were happy in the house.
The old woman didn't looked around the house.
Nobody didn't paint our home.
There is something who runs and stops.
Nobody were there to paint the door.

Discussion Sentences

A white house is good, but not a red one.
Nobody likes to see a bee go away.
The fox wss funny when he ate the chickens
The pancake went walking in the woods.
No mother likes pigs.
The rain ran up the window.
Rain, rain go away so the little ducks can play.

Appendix 7

Auditory Discrimination Test

This test was given individually after a try at longer group tests. It was administered after the children had had some lessons in listening and discriminating beginning sounds in minimal pairs of words.

The sounds tested were:

p t k f e s š č l m

b d g v ð z ž ǰ r n

Two trial pairs were given orally without requiring the child to write anything.

1. too - too
2. shoe - boo

Three trial pairs were given and the child was instructed to mark yes or no on his paper.

1. tie - tie
2. hi - my
3. paw - paw

Fifteen pairs were given as a test of his ability to discriminate consonants.

1. pie - bye
2. tie - die
3. pie - pie
4. kay - gay
5. few - view
6. thigh - thy
7. die - die
8. sue - zoo
9. gay - gay
10. shoe - chew
11. chaw - jaw
112. lie - rye
13. few - few
14. me - knee
15. sue - sue

Instructions for Auditory Discrimination Test:

Now we are going to play a game. I'll show you how. I'll say two words. Listen to see if they sound like the same word both times - if I've said the same word twice. Watch me as I say the words.
(ex. 1. too - too)

That's right. The two words sounded exactly the same. Here is another pair of words. Listen to see ...... etc.
(ex. 2. shoe - boo)

Are they the same? No, they're not. Now look at your paper. Here's the box marked with a tree. Point to the word yes in the box. Point to the word no. Now, I'm going to say 2 more words. Listen .... etc.
(ex. 3. tie - tie)

Are they alike? Yes, so put a circle around yes in the tree box.

Auditory Discrimination Test cont'

Examiner continues with 2 more examples. (hi - my, paw - paw)

Now, I'm going to say more pairs of words. If they sound like the same word both times, put a circle around yes; if they sound different, put a circle around no. Put your finger under the kite box here. Ready? Here's the first.

Auditory Discrimination Date

TESTING RECORD SHEET - Week of Jan 3 - Jan 7

(except for Jonathan who got 100 on earlier test in Dec.)

Name	
Drake, Richard	100 % (no trouble)
Engen, Dallas	-1 (me knee)
Fischer, Jonathan	100 %
Foster, Tom	-1 (me knee)
Gasteiger, Daniel	100 % (no hesitation or slightest doubt)
Hess, Rick	100 % (misund what he was to do on 1st half- went back
Kearet, Tom	-3 (Sue Zoo, Chaw Jaw, Me knee)
Knowland, Ned	-1 (Me Knee)
Lyon, Robbie	100 % (no trouble)
Raffensperger, Andy	100 % (new instruction)
Sadik, Kais	100 %
Spencer, John	-3 (Few View, Thigh Thy, Chaw Jaw)
Ward, Tom	100 %
Allen, Robyn	100 %
Albrecht, Joni	100 % (no trouble)
Burnham, Ann	-4 (Pie Bye, Few View, Thigh Thy, Me Knee)
Casserett, Lisa	-5 (Tie Die, Kay Gay, Few View, Thigh Thy, Chaw Jaw)
Ehlig, Rochelle	-1 (Me knee)
Feldt, Linda	-4 (Pie Bye, Few View, Sue Zoo, Chaw Jaw)
Grant, Joby	-1 (Me, Knee)
Shulman, Jana	-1 (Tie, Die)
Story, Christine	100 %
Warren, Cindy Ann	100 %

Matching Letters - September

	errors by 15 students
b d	14
g d	3
d p	1
p b	2
n u	1
h n	3
g n	1
w v	1
a f	1
l i	3
omit	5

Auditory Discrimination - January

	errors by 11 students
m n	7
b p	2
f v	4
s z	2
ċ ʃ	4
e ð	3
t d	2
k g	1

Visual Discrimination - October

	errors by 8 students
b d	3
d q	1
p b	1
b v	1
b j	1
m n	1
q j	1
d r	1
o q	1
e j	1
t e	2
m t	1
y z	1
v y	1
t x	1
k f	1
r h	1
j h	1
w v	1
g n	1

Dec 12th

TESTING RECORD SHEET – Recognizing lower case letters (Durrell)

Name	Errors	Res/Stim
Drake, Richard	-1	m/t
Engen, Dallas	0	
Fischer, Jonathan	0	
Foster, Tom	0	
Gasbeiger, Daniel	0	
Hess, Rick	-3	t/x, b/d, o/q
Kacret, Tom	-1	b/d
Knowland, Ned	0	
Lyon, Robbie	0	
Raffensperger, Andy	0	
Sadik, Kain	-2	t/e, m/n
Spencer, John	0	
Ward, Tom	0	
Allen, Robyn	-1	t/e
Albrecht, Joni	0	
Burnham, Ann	0	
Casserett, Lisa	0	
Ehlig, Rochelle	-9	re-test b/j K/f j/h w/v d/r, e/j, K/f, m/n, r/h, b/v, y/u, p/b, p/g converted
Feldt, Linda	-5	y/z, v/y, q/j, b/d, d/q
Grant, Joby	-1	g/n
Shulman, Jana	0	
Story, Christine	0	
Warren, Cindy Ann	0	

Based on Durrell Matching

Visual
Letter confusions

	nc	bd	nu	gd	af	hn	dp	pb	li	gn	wv
Mrs. Cushman	0	14	1	3	1	3	1	2	3	1	1

Appendix 7

Spelling Test

The words selected contained initial consonants d, p, b; m, n; l, w, h; th; s

final consonants m, s, n, t, g

five short vowels in trigrams (man, dog, pet, sit, bus)

two one-syllable, long vowel words conditioned by final e (name, like)

a) 7 words followed the phonics program, almost all had been used as examples at one time or another.

b) 5 words were taken from common spelling lists - should be visually familiar to the children from their reading (have, we, was, the, come)

Directions to the Teacher: Say word. Read sentence. Repeat word. Use lined paper - two columns of six each. Fold a yellow sheet to get a crease Tell students: "I want to see if you can write some words. I'll say a word, then I'll put it in a sentence and I'll say it again. If you're not sure of how to write the word, do the best you can."

1.	dog	My dog chases cars.	dog
2.	man	This man is tall.	man
3.	have	I have a pet.	have
4.	sit	It's time to sit down.	sit
5.	pet	Do you have a pet?	pet
6.	we	We played a game.	we
7.	bus	Some children take the bus home.	bus
8.	come	Come to my house.	come
9.	was	I was happy.	was
10.	name	Her name is Mary.	name
11.	like	I like him.	like
12.	the	Open the door.	the

Appendix 7

Spelling Test Errors

Regular - short vowel			Regular - long vowel			Irregular		
Word	**Error**	**No.**	**Word**	**Error**	**No.**	**Word**	**Error**	**No.**
dog	bog	2	name	na	2	have	here	2
				hmes	1		ha[illegible]	1
man		0		orm	1		haf	2
				nam	2		hav	2
sit	set	2		naem	1		ha	1
				nom	1		hveve	2
pet	pot	1		namy	1			
	pat	5				we	wate	1
			like	lki	1		wie	1
bus	bas	4		lile	1		w	1
	bes	1		leke	1		ya	1
	bast	1		lice	1			
	das	1				come	c, cm,cma	3 (1 each)
	sdn	1					cem	1
	buas	1					cam	1
							cum	1
							cume	1
							cane	1
							came	3
							coem	1
							coum	1
							coam	1
						was	waz	1
							whs	1
							wes	1
							whes	1
							yas	1
						the	ratre^{sl}	2

Total possible right = 276 words

Short vowel 19 errors or 7% of total

Long vowel 13 errors or 5% of total

Irregular 33 errors or 12% of total

65 errors 24%

Gr. I = 10 Ss (omit Nancy)
Gr. II = 8 Ss
Gr. III = 5 Ss

Errors
Roswell - Chall

Gr. I = 11 S's
Gr. II = 6 S's
Gr. III = 4 S's

Appendix 7

March

Single Cons (19)

	I	II	III	
y	4	1	4	
g	1	1	3	
z		1		
v		1	2	
l			1	
w			1	
b			1	
d			1	
	5	4	13	= 23
av.	.5	.5	2.0	1.0

Isol. Short - Long Vowels

	I	II	III	
a	1	1		
e	4	4	5	
i				
o	1	3	5	
u	2	3	5	
ā			2	
ē			2	
ī			2	
ō			2	
ū			2	
	9	12	25	= 46
av	1.0	1.5	5.0	2.3

Cons. blends (10)

	I	II	III	
ch		3	4	
fl	1	5	4	
tr	1	4	3	
cr	2	5	5	
sh		1	1	
str	3	7	5	
scr	2	6	5	
st	1	1	2	
wh		1	1	
th		1		
	10	35	30	= 85
av.	1.0	6.0	6.0	= 4.3

Trigrams (10)

	I	II	III*
	27	36	44
av.	2.7	4.0	9.0

silent-e (5 pairs: e.g. pin-pine)

	I	II	III*	
short	5	12	17	
long	15	13	22	
	20	25	39	= 84
av.	2.0	3.0	8.0	4.3

Vowel Digraphs (12)

	I	II	III*
	81	58	60
av.	8	7.	12.

Syllabication (8)

	I	II*
	48	40
av	4.8	5.0

May

Single Cons. (19)

	I	II	III	
c	1			
d			1	
	1	0	1	= 2
av.	.09	0	.25	= .1

Isol. Short-Long Vowels

	I	II	III	
a	1	1	1	
e	2		2	
i				
o	2	1		
u	2		2	
ā				
ē				
ī				
ō				
ū				
	7	2	5	= 14
av.	.64	.33	1.25	= .6

Cons. blends (10)

	I	II	III	
ch				
fl		1		
tr		1	3	
cr	3	5	4	
sh		1		
str	3	4	4	
scr	4	3	4	
st				
wh		2		
th		1	1	
	10	18	16	= 44
av.	.9	3.0	4.0	= 2.1

Trigrams (10)

	I	II	III	
	5	11	16	= 32
av.	.45	1.83	4.0	= 1.5

Silent -e (5 pairs: e.g. pan, pane)

	I	II	III	
short	0	1	1	
long	0	0	10	
	0	1	11	= 12
av.	0	.17	2.8	= .57

Vowel Combinations (12

	I	II	III*	
	21	40	11*	= 72
av.	1.91	6.67	11	= 4.0

Syllabication (8)

	I	II	
	34	36	= 70
av.	3.09	6.00	= 4.12

* test not attempted with some Ss in group

SILENT READING TEST
MARCH-APRIL '66

10 students

	Pre-pr.	Primer	1st	2nd	3^1	3^2	4	5	
	6	9	9	9	5	4	5	6	no of ques. per grade
NAME	6	15	24	33	38	42	47	53	CUMULATIVE
Andy									
Dallas									
Daniel			24	+7 31	+0 31	+4 35	+4 39	+4 43	grade 3^2
John						42	+2 44	+3 47	4
Jonathan									
Kais									
Ned									
Richard								53	5
Rick									
Robbie		15	+8 23	+6 29	+1 30	+2 32	+3 35	+3 38	3^1
Tom F		15	+8 23	+8 31	+3 34	+4 38	+3 41	+3 44	4
Tom K									
Tom W									
Ann									
Christine									
Cindy Ann				33	+2 35	+5 40	+3 43	+5 48	5
Jana		15	+8 23	+8 31	+2 33	+2 35	+1 36	+3 39	3^2
Toby									
Joni		15	+8 23	+9 32	+3 35	+4 39	+3 42	+3 45	4
Linda					38	+4 42	+4 46	+6 52	5
Lisa			24	+8 32	+2 34	+4 38	+3 41	+2 43	4
Nancy									
Robyn									
Rochelle									

name	pre-primer	primer	1st	2nd	3^1	3^2	grade:
	6	9	9	9	5	4	no of questions per grade
	6	15	24	33	38	42	cumulative
Andy		15	+7 22	+1 23			1
Dallas							
David							
John							
Jonathan		24	+3 27	+3 27			2
Kris			24	+8 32	+3 35		3^1
Nic			24	+6 30			2
Richard							
Rick							
Robbie							
Tom F							
Tom K							
Ann (1)		(15)	+7 22	+1 23			1
Ann			24	+6 30			2
Christine		(15)	+7 22	+5 27			2
Cindy Ann							
Jana							
Toby							
Toni							
Linda							
Lisa							
Nancy		15	+8 23	+6 29	+2 31	+4 35	3^1
Robyn			24	+6 30	+2 32		2
Rochelle							

Silent Reading Test

	Pre-primer	Primer	First
Possible	6	9	9
Cumulative	6	15	24
Engen, Dallas	6 1.02	+7 13 2.15	+6 19 3.10
Kaaret, Tom	6 1.27	+8 14 2.25	+4 18 4.0
Grant, Joby	6 2.50	15 4.30	+6 21 7.10
Hess, Rick	4 3.0		
Rochelle, Ehlig	4 1/2 1.35	+7 11 1/2 1.57	

Range

21
19
18
11 1/2
4

Range = 21 to 4

Time II ECP

Silent Reading Test

Name	Pre-primer	primer	1st	2nd	3^1	3^2	4	5	Rank Order
Andy		3:55	6:0						6
D[illegible]	1:02	[illegible]	3:10						4
Daniel			1:58	6:37	4:30	2:35	3:15	3:30	18
John			1:55	5:45	3:05	3:20	6:0	4:10	21
Jonathan			1:12	8:25	4:10				9
Kris			1:45	6:15	4:30				13
Ned			4:0	10:35					11
Richard				1.41	1:05	:51	:41	1:23	24
Rick	3:0								1
Robbie		:43	:54	3:12	1:35	2:15	1:30	3:05	15
Tom F			1:20	4:00	3:50	3:05	3:25	3:30	19
Tom K	1:27	2:25	4.0						3
Tom W			5:20						7
Ann			3:15	5:45					10
Christine			5:05	11:15					8
Cindy Ann			1:44	4:52	3:25	3:00	2:30	4:30	22
Jana			1:02	3:05	2:00	6:00	3:16	3:45	16
Toby	2:50	4:30	7:10						5
Joni		:40	:56	2:16	1:10	1:33	1:30	2:35	20
Linda			:57	3:10	1:15	1:20	1:45	2:25	23
Lisa			1:13	4:40	3:30	3:30	3:55	5:55	17
Nancy			.55	1:53	1:25	2:20	2:55		14
Robyn			3:05	3:20	5:05				12
Rochelle	1:35	1:57							2

Appendix 7

Silent Reading Test - Rate of Reading in Minutes and Tenths

Passage Read

	Pre-primer	Primer	1st	2nd	3'	3²	4	5
Pre-primer	3.0							
Primer	1.6	1.9						
1st	1.0 1.4 2.8	2.3 2.4 3.9 4.5	3.2 4.0 6.0 5.3 7.2					
2nd			1.2 4.0 3.1 3.3 5.1	8.4 10.6 8.3 5.8 11.3	4.2 5.1			
3'			0.9 1.8 .9	3.2 6.3 1.9	4.5 1.4	2.3 2.3	1.5 2.9	3.1
3²			1.0	3.1	1.6 2.0	6.0 3.3 1.6 3.5	3.2	3.8
4			1.3 2.0 1.9 .9 1.2	4.0 6.6 5.8 2.3 4.7	3.8 4.5 3.1 1.2 3.5	3.1 2.6	3.4 3.3 6.0 1.5 3.9	3.5 3.5 4.2 2.6 5.6
5			0.9 1.8	1.7 3.2 4.8	1.1 1.3 3.4	0.8 1.3 3.0	0.7 1.8 2.5	1.4 2.4 4.5

															Metropolitan Ach.		
	Readiness	I.Q.	Benet	Clappy	Matching letters	Visual Discrim	Auditory Discrim (15 pairs)	Blending Sounds	Spelling Test (12 words)	Spelling Re-test	SRA #11	Cons. Blends	Silent Reading total correct (possible 53)	Est. Gr level	Wd. know.	Wd. Discrim	Reading
Richard	82	107	8	reads	-2	-1	0		0		0		53	5	3.2^+	3.1	3.9^+
Joni	81	124	8	3/4	0	0	0		0		0		45	4	2.9	3.6^+	3.7
Robbie	92	112	7	3/4	0	0	0		-5		0		38	3^1	3.2^+	3.6^+	3.0
Nancy	—	—	—	—	—	—	—		-1		0		35	3^1			
Linda	90	109	9	5 words	0	-5	-4		0		-1	bl/pl	52	5^-	3.2^+	2.8	3.9^+
Daniel	89	112	9	2 words	0	0	0		-1		0		43	3^2	2.9	3.1	3.4
Tom F.	85	102	9		0	0	-1		0		0		44	4	2.7	3.1	3.7
Lisa	88	121	5		0	0	-5		0		0		45	4	2.5	3.1	3.7
Cindy	82	110	11	1/2	0	0	0		0		0		48	5^-	2.9	3.1	2.8
Jana	72	104	9		-2	0	-1		-1		0		39	3^2	3.2^+	2.5	2.5
Jonathan	80	118	8		0	0	-1		-2		—		27	2	—	—	—
John	73	114	10		-4	0	-3		-1		0		47	4	2.9	3.6^+	3.4
Kaie	60	85	6		-2	-2	0	(—)	-3		0		35	3^1	2.2	3.1	3.4
Ned	82	115	11		-1	0	0		-2		-1	omit	30	2	2.7	2.8	2.1
Robyn	79	113	9		-1	-1	0	(—)	-2		0		32	2	2.2	2.8	3.0
Tom W	77	118	10		0	0	0		-5		0		23	1	2.5	2.8	1.8
Chris	79	116	6		-1	0	0		-4		-1	cr/cl	27	2	2.4	2.4	2.3
Ann	80	124	9	3 words	-4	0	-4		-3		0		30	2	2.4	2.4	2.1
Andy	56	114	8		-4	0	0		-7		0		23	1	1.8	2.3	2.0
Toby	65	112	6		-1	-1	-1		-6		—		21	1	2.0	2.4	1.8
Tom K.	73	104	7		-2	-1	-3	(—)	-8		—		18	1	1.9	2.2	1.9
Dallas	78	112	2		-7	0	-1	(—)	-7		—		19	1	1.8	1.5	1.8
Rick	64	101	7		-4	-3	-1		—		—		4	pre-pr.	1.6	1.4	1.8
Rochelle	47	94	5		-3	-9	0	(—)	-7		—		11	primer	1.7	1.8	1.6
		110.48	177														
					Errors	Errors	Errors		Errors		Errors						

Appendix 8

Texts Used

Chandler Publishing Co. (San Francisco, 1965): Slides
Swings
Bikes
Supermarket
Trucks and Cars to ride
(1964) Let's Go
All by D. M. Baugh and M. P. Pulsifer

Houghton-Mifflin (Boston, 1957): Come Along by P. McKee, M. L. Harrison, and A. McCowen.

Houghton-Mifflin (Boston, 1957): On We Go by P. McKee, M. Lucile Harrison et al.

Laidlaw Bros. (River Forest, Ill., 1961): Stories to Remember by H. G. Shane and K. B. Hester.

Laidlaw Bros. (River Forest, Ill., 1964): Storyland Favorites by H. G. Shane and K. B. Hester.

Laidlaw Bros. (River Forest, Ill., 1961): Tales to Read by H. G. Shane and K. B. Hester.

Merrill, C. E. (Columbus, 1960): Merry-Go-Round by L. B. Jacobs and J. J. Turner.

Row Peterson, (Evanston, 1952): The New Wishing Well by S. Coughlan and M. O'Donnell.

Row Peterson, (Evanston, 1953): I Know a Story by M. B. Huber et al.

Row Peterson, (Evanston, 1962): Once Upon a Time by R. P. Maison.

L. W. Singer, (Syracuse, 1965): Story Fun by M. Pratt and M. Meighen.

L. W. Singer, (Syracuse, 1965): Story Wagon by M. Pratt and M. Meighen.

My Pet (unpublished) by Joanne Robinson

The House That Nobody Lived in, (unpublished) revised by Mary Sue Ammon.

Appendix 8

List of Books Taped

Doubleday, (N.Y., 1931): Angus and the Cat by M. Flack.

Golden Press (N.Y., 1965): Listen Little Tiger by K. N. Daly.

Golden Press (N.Y., 1965): Little Tiger Takes a Trip by K. N. Daly.

Harper and Bros. (N.Y., 1961): Albert the Albatross by Syd Hoff.

Harper and Bros. (N.Y., 1959): The Plant Sitter by G. Zion.

Harper and Row (N.Y., 1958): Danny and the Dinosaur by Syd Hoff.

Harper and Row (N.Y., 1957): Little Bear by E. H. Minark

Holt, Rinehart and Winston (N.Y.,): Good Night Mr. Beetle by L. Jacobs.

L. W. Singer (Syracuse, 1965): Story Fun by M. Pratt and M. Meighen.

Random House (N.Y., 1957): The Cat in the Hat by Dr. Seuss.

Readers Digest Services Inc. (Pleasantville, 1963): Part A (4 stories)
Part 1 (4 stories)

Scholastic Book Services (N.Y., 1938): Five Chinese Brothers by Bishop, C. H. and Wiese, K.

Scholastic Book Services (N.Y., 1955): Is This You? by R. Krauss and C. Johnson.

(N.Y., 1936): Story of Ferdinand by M. Leaf.

(N.Y., 1961): Curious George by H. A. Rey.

(N.Y., 1940): Caps for Sale by Slobodkina.

(N.Y., 1958): What do You Say Dear? by S. Joslin.

(N.Y.,1952): The Biggest Bear by L. Ward.

Millions and Millions and Millions by L. Slobodkin.

Big Brother by C. Zolotow.

Cats Cats Cats by G. Skaar.

Little Blue and Little Yellow by Leo Lionni.

c = context
ph = phonic
ct = another child tells

Group:

Name	p	l	response/stimulus	CS	Cues	p	l	response/stimulus	CS	cues
								name;		

Content of lesson and times

1

2

3

4

Comments:

Date:

Reading Groups

Text Pages covered time

1.

2.

3.

4.

Special

a.

b.

c.

Assigned written work

Class:

Group:

RUNNING RECORD

Time Code
1 = 1 min. or less
5 = 5 min. or less
Otherwise - exact time recorded

Date	Content	Lesson	Time	Comments